

THE REPORT

OF THE

PRESIDENT

OF

QUEEN'S COLLEGE, BELFAST,

FOR

THE YEAR ENDING OCTOBER, 1875.

Presented to both Houses of Parliament by Command of Her Majesty.



DUBLIN:

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TO THE QUEEN'S MOST EXCELLENT MAJESTY.

MAY IT PLEASE YOUR MAJESTY,—

I have the honour of presenting to your Majesty the following Report regarding the condition of this College for the twelve months ending the 1st October 1875, embracing the Three Terms and the Summer Classes of that year. It affords me renewed satisfaction to be able to record the steady progress of the College, the diligence and advancement of the Students, the honors and emoluments many of them have won at home and abroad, the places of trust and importance a large number of them have been called to fill in their different professions and avocations, together with the impulse which this seat of learning continues to give to the cause of education throughout the country. During the year embraced in this Report, 393 Students attended the courses of lectures in the various departments of Arts, Medicine, Engineering, and Law, of whom 346 were matriculated and 47 non-matriculated. In the various testing examinations, whether those conducted within the walls of the College itself for Scholarships, Exhibitions and Prizes, or those of the Queen's University for its high distinctions and rewards, many of our Students during the past year have won positions for themselves which attest their past labours and exertions, whilst affording an encouraging earnest of their future usefulness and success in life. The Reports of the Civil Service Commissioners and of different governmental authorities, at home and abroad, continue to afford most satisfactory testimony that the Students of this College still hold their place amongst those of the other Universities of the Empire, not only in the arenas of scientific and literary competition, but in the practical work afterwards assigned to them in the various departments of the Public Service. Referring to the subjoined Tables, which I think it important to publish, I beg permission to advert to the progress this College has made since its inauguration. The entire number of separate Students who entered, studied, and completed their courses in the College, since its opening at the end of 1849,

amounts to 2,871. Of these, 854 appeared on the rolls during the first ten years of its existence; during the next ten years 1,218 were enrolled and attended their courses, showing an increase during the second decade, of 364 distinct entries as compared with the former; and taking into account the entries of the last five years, we have a gross result for the last fifteen years of 1,810.

I.—NUMBERS AND RELIGIOUS PERSUASIONS* of STUDENTS attending Lectures in QUEEN'S COLLEGE, BELFAST, in each Session from its opening.

Sessions.	Matriculated.	Non-Matriculated.	Total.	Church of Ireland.	Roman Catholic.	Presbyterian.	Methodist.	Independent.	Various.	Total.
1848-50, . . .	90	105	195	33	5	145	4	1	7	195
1850-51, . . .	110	75	185	33	10	136	4	1	1	185
1851-52, . . .	120	69	189	40	14	129	5	-	1	189
1852-53, . . .	101	53	154	33	15	106	4	-	2	154
1853-54, . . .	114	54	168	36	14	107	6	-	5	168
1854-55, . . .	118	65	183	34	14	131	3	-	1	183
1855-56, . . .	119	74	193	33	19	131	5	2	3	193
1856-57, . . .	136	58	194	35	14	131	3	2	9	194
1857-58, . . .	153	54	207	31	14	154	4	1	3	207
1858-59, . . .	160	63	223	45	14	153	8	2	1	223
Average of first 10 years, }	122.1	67	189.1	35.3	13.3	131.7	4.6	.9	3.3	189.1
1859-60, . . .	199	58	257	43	16	184	8	2	4	257
1860-61, . . .	230	73	312	57	22	216	7	-	10	312
1861-62, . . .	299	76	375	59	17	266	13	4	16	375
1862-63, . . .	335	53	388	61	24	275	11	3	14	388
1863-64, . . .	340	47	387	63	26	261	10	3	24	387
1864-65, . . .	356	49	405	53	22	286	9	1	30	405
1865-66, . . .	350	53	413	60	19	281	13	2	33	413
1866-67, . . .	357	30	387	57	19	225	18	1	67	387
1867-68, . . .	357	33	390	59	16	233	25	2	55	390
1868-69, . . .	350	58	408	51	15	229	26	2	54	408
Average of second 10 years, }	317.2	51	368.2	56.6	19.6	244.6	14.0	2.0	31.2	368.2
1869-70, . . .	328	25	353	67	18	214	19	3	42	353
1870-71, . . .	357	43	380	76	14	226	23	4	38	380
1871-72, . . .	323	33	358	80	17	203	12	1	45	358
1872-73, . . .	328	23	351	79	15	203	21	1	32	351
1873-74, . . .	344	31	375	87	17	201	26	2	42	375
1874-75, . . .	346	47	393	85	11	223	24	3	47	393

* I have thought it right to classify the students of the various Churches as they designate themselves in the forms filled up by them at entrance.

II.—NUMBERS and RELIGIOUS PERSUASIONS of STUDENTS who have entered QUEEN'S COLLEGE, BELFAST, in each year since its opening.

Sessions.	Matri- culated.	Non- Matri- culated.	Total.	Church of Ireland.	Roman Catho- lic.	Presby- terian.	Method- ist.	Inde- pend- ent.	Va- rious.	Total.
1849-50,	90	105	195	33	5	145	4	1	7	195
1850-51,	51	42	93	15	7	68	1	-	2	98
1851-52,	42	40	82	25	7	47	2	-	1	82
1852-53,	31	23	54	16	7	28	2	-	1	54
1853-54,	33	23	56	14	5	36	3	-	4	62
1854-55,	41	38	79	13	6	56	2	-	2	79
1855-56,	33	29	62	17	5	36	2	2	-	62
1856-57,	40	28	68	18	4	40	1	-	5	68
1857-58,	43	28	71	8	6	55	2	-	-	71
1858-59,	51	37	88	24	8	51	4	1	-	88
Entered first 10 years,	461	393	854	183	60	562	23	4	22	854
1859-60,	66	24	90	14	6	64	4	-	2	90
1860-61,	96	41	137	29	13	85	8	-	7	137
1861-62,	114	38	152	27	5	101	6	3	10	152
1862-63,	115	23	137	23	12	92	5	-	5	137
1863-64,	109	18	127	25	5	86	3	-	7	127
1864-65,	108	27	135	23	6	97	3	-	7	135
1865-66,	88	30	118	17	7	83	5	-	6	118
1866-67,	95	12	107	16	6	81	10	-	14	107
1867-68,	90	22	112	30	5	63	1	1	22	112
1868-69,	79	24	103	16	7	60	6	2	12	103
Entered in second 10 years,	960	218	1,218	209	72	791	46	7	92	1,218
Total in 20 years,	1,421	651	2,072	392	132	1,354	69	11	114	2,072
1869-70,	83	15	98	23	8	54	4	1	8	98
1870-71,	84	30	114	36	2	57	8	1	10	114
1871-72,	78	25	103	28	6	50	5	1	13	103
1872-73,	99	14	113	33	6	60	9	-	5	113
1873-74,	88	25	113	28	6	63	13	2	11	123
1874-75,	100	31	131	33	3	78	5	-	12	131
	1,963	791	2,754	573	163	1,716	113	16	173	2,754†

III.—RETURN of the Number of Medical Students in attendance in each Session.

Session.	Matri- culated.	Non-Ma- trriculated.	Total.	Session.	Matri- culated.	Non-Ma- trriculated.	Total.
1849-50,	28	27	55	1862-63,	69	33	122
1850-51,	20	35	55	1863-64,	110	33	143
1851-52,	25	39	64	1864-65,	126	25	151
1852-53,	29	33	62	1865-66,	130	29	159
1853-54,	29	37	66	1866-67,	137	17	174
1854-55,	39	36	75	1867-68,	163	16	181
1855-56,	33	48	81	1868-69,	150	24	174
1856-57,	36	25	61	1869-70,	145	22	167
1857-58,	35	32	67	1870-71,	168	26	184
1858-59,	45	34	79	1871-72,	162	25	187
1859-60,	56	39	95	1872-73,	174	14	188
1860-61,	70	46	116	1873-74,	175	30	205
1861-62,	81	48	129	1874-75,	184	36	220

* Of the 791 who entered as non-matriculated Students, 171 afterwards passed a matriculation examination. The College Register contains 2,130 matriculated and 624 non-matriculated, in all 2,754 students.

† Adding the return for the present incomplete Session, 1875-76, 2,371 Students have been enrolled since the opening of the College, and 383 are now in attendance.

[That of President's Report continued, p. 2.]

[TABLE.

IV.—RETURN of the NUMBER of STUDENTS attending in the several Faculties during the Session 1874-75.

Arts,	110	
Civil Engineering,	16	
Law,	18	
Medicine—Matriculated,	184	} 228
Non-matriculated,	55	
Various—Matriculated,	14	} 25
Non-matriculated,	11	
	398	
Less Duplicates,	393	

V.—RETURN showing the NUMBER of STUDENTS attending the Lectures of each PROFESSOR in each year since the opening of the College.

PROFESSOR OF	1842-43.	1843-44.	1844-45.	1845-46.	1846-47.	1847-48.	1848-49.	1849-50.	1850-51.	1851-52.	1852-53.	1853-54.	1854-55.
Greek,	71	74	48	23	32	38	43	36	44	58	77	100	140
Latin,	53	72	44	25	32	35	40	29	44	54	72	94	139
Mathematics,	85	70	51	36	42	44	45	52	55	62	78	95	105
English,	52	46	55	35	44	44	51	43	56	65	73	100	116
Modern Languages,	62	55	41	31	34	52	43	52	56	63	78	150	177
Celtic,	The Lectures open to the public.												
Natural Philosophy,	48	43	61	29	40	55	35	37	43	34	46	95	95
Natural History,	12	49	75	52	58	68	58	69	62	47	84	77	77
Mineralogy,	5	5	14	13	15	13	9	20	13	11	18	79	186
Logic & Metaphysics,	3	—	45	39	44	45	43	51	46	54	44	82	105
Chemistry,	40	56	75	53	52	78	50	76	68	80	89	105	105
Engineering,	18	13	15	9	12	12	8	17	15	11	15	14	16
Agriculture & Medical Jurisprudence,	13	21	24	14	23	17	16	20	25	22	27	21	24
Anatomy,	35	44	55	51	53	63	65	46	52	68	81	101	107
Medicine,	9	17	17	12	15	18	33	27	19	22	29	25	42
Surgery,	24	15	26	29	28	30	48	32	30	29	29	51	53
Midwifery,	14	10	12	16	17	18	24	13	7	17	14	26	36
Materia Medica,	11	14	16	17	17	23	23	11	18	23	27	33	78
English Law,	17	15	17	15	11	15	10	14	12	13	11	16	14
Jurisprudence,	11	11	23	18	19	11	13	12	27	20	23	19	20

PROFESSOR OF	1855-56.	1856-57.	1857-58.	1858-59.	1859-60.	1860-61.	1861-62.	1862-63.	1863-64.	1864-65.	1865-66.	1866-67.	1867-68.
Greek,	167	190	133	118	74	72	73	64	60	62	61	73	73
Latin,	149	113	118	112	96	86	89	87	77	65	72	83	91
Mathematics,	122	111	113	98	88	64	87	84	68	65	67	72	64
English,	185	125	128	113	102	91	91	86	74	72	69	70	78
Modern Languages,	150	125	145	151	150	142	128	137	129	128	130	142	155
Celtic,	Vacant.												
Natural Philosophy,	184	186	102	118	113	108	149	—	102	104	89	113	135
Natural History,	83	112	121	181	97	110	105	86	120	110	183	185	115
Mineralogy,	114	103	91	116	101	81	81	59	65	48	52	85	51
Logic & Metaphysics,	181	184	122	184	127	123	123	105	119	122	118	130	129
Chemistry,	25	30	31	29	27	24	20	25	18	28	23	24	10
Engineering,	22	23	20	38	35	33	35	34	41	37	30	53	47
Agriculture & Medical Jurisprudence,	105	114	183	133	155	158	157	151	184	169	174	100	196
Anatomy,	27	35	44	48	67	50	57	61	68	57	50	59	53
Medicine,	54	47	50	55	77	79	75	63	73	78	81	92	58
Surgery,	22	34	19	23	35	37	40	38	45	43	39	28	37
Midwifery,	37	29	38	47	47	38	46	31	46	46	52	47	51
Materia Medica,	12	12	14	19	13	20	17	23	30	21	28	27	22
English Law,	29	27	31	34	26	24	29	33	37	36	29	30	23

This return is given more fully in detail in the Appendix, pp. 15, 17.

The return of Lectures delivered in each Session appears in pp. 22, 23 of the Appendix.

The introduction in the Appendix of a general outline of the systematic courses pursued in this College in its various departments will convey some idea of what is required not only by the Council of the College, but also by the Regulations and Ordinances of the Queen's University in Ireland. A perusal of the subjoined sketch will make it obvious that the founders of the Queen's Colleges adopted a system of instruction which keeps steadily in view, in all our collegiate and university arrangements, the true idea of sound education, viz. :—the culture and discipline of the mind in mastering and understanding everything valuable and elevating in ancient and modern literature, and in the fundamental principles also, together with the experiments and inductions, of modern science and philosophy. It will be inferred from the outline here subjoined, as well as from the digest of courses and subjects given in the Appendix, that teaching and experiments, and the constant examination of the Students, with their close attendance on Lectures, are indispensable requirements, from the time of matriculation to the period of graduation. Preparation for mere examining Boards may be obtained by systems of cramming, constructed by persons of poor ability and slender reputation from the works and labours of superior men, but in the end they are found to be superficial, injurious to the cause of science, and to the permanent advancement of the youths, many of whom prefer pure grinding to the processes of mental training and patient investigation required by our universities. The abuses arising from the substitution of what is flimsy and of temporary utility for what is solid, substantial, and lasting, are becoming so manifest that some remedy must speedily be applied. I invite attention to a synopsis of the courses laid down by the Council, and rigidly pursued by the Students of this College, and in doing so I express my decided conviction that the success of the young men of this College, who have not only highly distinguished themselves at examinations in the different departments of the Civil Service, but by their subsequent promotion (in many instances very remarkable), must be ascribed to the excellence of our curricula, as foundations of knowledge and of individual and public advantage, both being the natural results.

Immediately after the passing of the Queen's Colleges Act in 1846, introduced into Parliament by their illustrious founders, Sir Robert Peel and Sir James Graham, it became apparent not only to them but to Lord Heytesbury, then Lord Lieutenant of Ireland, that the granting by a Charter of full University privileges and benefits to the Queen's Colleges became necessary for the advancement and encouragement of learning in Ireland; and His Excellency, accordingly, summoned the Board of Presidents and Vice-Presidents then existing, and gave us full instructions for carrying out this important object. The Earl of Clarendon afterwards (during his life the first Chancellor appointed by your Majesty) devoted his great energies to inaugurate the Colleges in 1849, and the Queen's University, aggregating the three Colleges of Belfast, Cork, and Galway, in 1850. The result of this Act of

University Incorporation fully justifies its expediency and wisdom, as the subjoined Returns will afford abundant proof.

TOTAL NUMBER of INDIVIDUAL GRADUATES, etc., from QUEEN'S COLLEGE, BELFAST, to October, 1875, inclusive, 839

Divided thus—

Bachelors in Arts,	537
This number includes Masters in Arts, Doctors in Laws, and Bachelors in Laws, who are all Bachelors in Arts.	
The Diploma of Elementary Law has not been awarded to any Student from Belfast who is not also a Bachelor in Arts.	
Doctors in Medicine,	294
This number includes the Degrees of Master in Surgery and the Diplomas in Midwifery, which are only conferred on Doctors in Medicine.	
B.E. and Diploma in Engineering,	54
Dip. Agriculture,	4
	<hr/>
	889

As 48 Doctors in Medicine and 2 Bachelors in Engineering are also Bachelors in Arts, the number of individual Graduates from Belfast to October, 1875, inclusive, is	50
	<hr/>
	839

As of the total number of Graduates from Queen's College, Belfast, 80 passed some portion of their Undergraduate career at one or both of the other Queen's Colleges, the number of Graduates educated at Belfast solely is 759.

It may be interesting to give here the following denominational returns of Students attending the Colleges of the Queen's University in the Session 1874, taken from the Calendar of the Queen's University—

Church of Ireland,	238
Roman Catholics,	217
General Assembly Presbyterians,	248
Other Denominations,	78
	<hr/>
	781

In the midst of many difficulties and discouragements, it will be seen that these Colleges, holding their successful and onward course, afford a striking proof of the perfect practicability of united secular and separate religious instruction, combining, as they do, distinguished Professors of various persuasions and sentiments with a mass of Students who imbibe by example, and insensibly, those social qualities of mutual concession and co-operation which are essential to the advancement of any country in prosperity and happiness.

By a constant, free interchange of sentiment on the part of the authorities of the College, its administration has ever been faithfully kept on the broad lines of its comprehensive foundation, and thus has happily been preserved from every stain or imputation of sectarianism.

I beg most respectfully to express, on the part of this College, our cordial thanks to the Government for having restored to each

of the three Colleges the original grant of £1,600 a year for the maintenance of their several departments, especially those of the Library, Museum, and the Philosophical Sections. The relief that this wise and necessary act has afforded is already felt and appreciated throughout the College. The Library, aided by this and some munificent private contributions, both of money and of authors, will now begin to assume the proportions that a great public depository of valuable books of general interest, and of science, literature, and art ought to have, both in its connexion with the Queen's College and University, and with this great, intelligent, and manufacturing province of Ulster; the Library being always open to any respectable person properly introduced. The voluminous copies of Parliamentary Papers, lodged in the Library from time to time, under the sanction of Government, for the inspection of the public, are rapidly filling our available shelves, so that I expect soon to have the pleasing duty of applying to the Board of Public Works for an extension of the Library buildings.

I hope in my next Report to record, as having been effected by the Government, other acts of liberality and justice towards this and the other Colleges, proving the determination of our rulers to place these institutions on a sound and satisfactory foundation, enabling their authorities and administrators with increased efficiency to diffuse the blessings of knowledge and enlightenment amongst all classes of your Majesty's subjects.

All the Scholarships and Prizes at the disposal of the Council for the year 1874-75 were duly awarded. It may remove a misapprehension regarding the Scholarships founded by your Majesty in this College to state that in all the departments they are annually competed for, with the exception of those obtained by the Scholars of the Second Year in Arts, which are tenable for two years. In no instance is a Scholarship awarded, unless on the ground of sufficient merit shown at the examination by the candidate.

It is gratifying to record, that in addition to our Royal Scholarships supported by the grant on the Consolidated Fund, several very valuable Scholarships in connexion with this College have been founded from time to time by private benefaction. Amongst these are the three Sullivan Scholarships, founded by the will of the late Dr. Sullivan, tenable for three years, value £40 each; the two Porter Scholarships, tenable for two years, value £50 each; the two Dunville Studentships, tenable for two years, the first year value £45, and the second year value £100 each; such share of the twenty-two University Exhibitions and Prizes, founded by the public and the munificence of Sir Robert Peel, as may be obtained by the Students of this College in competition with those of Cork and Galway; Exhibitions founded in this College by the Royal Academical Institution, and the Methodist College; and a recent benefaction of two Pakenham Scholarships, tenable for two years, value £25 each, founded by the Reverend Arthur Hercules Pakenham, one *in memoriam* the late Major-General the Honorable Sir Hercules Robert Pakenham, the other *in memoriam* the Honorable Emily Lady Pakenham.

I feel it my duty once more to advert to an important matter connected with the Queen's Colleges in Ireland, and which has been frequently brought under the notice of your Majesty's Government, namely, the expediency of granting to the Graduates of the Queen's University the privilege of franchise, so as to be represented in Parliament. This University now commands a very large constituency, rapidly increasing, and the Graduates, being educated men, are not inferior to any others for general intelligence. They naturally complain that their University is the only one in the empire left without a representative willing and able to advocate their cause, and sustain the educational interests of the University.

Last year I published the Reports of the Deans of Residences regarding the performance of their duties, and I then expressed concurrent satisfaction with them that the extension of Summer Classes in the College had enabled me to afford additional opportunities to these functionaries for giving, within the walls of the College, religious instruction to the Students of their respective denominations. This year the Deans presented their separate Reports to the Court of Visitors at the last triennial Visitation, and I have reason to know that these gentlemen continue to avail themselves of the increased opportunities they now possess.

I have long been impressed with the conviction that as this College possesses an admirable Chemical Laboratory the great mechanical and economic demands of the period and the country make it necessary that we should possess increased facilities for the illustration of the more strictly applied and practical sciences. Dr. Everett, the Professor of Natural Philosophy, has furnished me with an account of the immense work he finds it necessary to be done by the Students in his department. In the Appendix I print his memorandum respecting the arrangements for teaching Natural Philosophy elsewhere. Mr. Fuller, the Professor of Engineering, is at present most usefully engaged in extending the mechanical appliances of his department.

Various returns will be found given at full length in the subjoined Appendix—viz., statements of the fees paid to each Professor, of the number of Students in each class, of the number of lectures delivered from the different chairs, together with the accounts of expenditure, an enlarged digest of subjects, &c., and the papers used at the various examinations during the past session.

All of which, on behalf of this College, is testified by your Majesty's most dutiful servant,

P. SHULDHAM HENRY,
President.

QUEEN'S COLLEGE BELFAST,
20th February, 1876.

APPENDIX.

APPENDIX, No. 1.

Appendix,
No. 1.

QUEEN'S COLLEGE, BELFAST, and QUEEN'S UNIVERSITY.

Queen's
College,
Belfast, and
Queen's
University.

THE COLLEGE is a Corporation under the name and style of "QUEEN'S COLLEGE BELFAST." It was founded under the provisions of the Act 8 & 9 Victoria, cap. 66, intituled "An Act to enable Her Majesty to endow new Colleges for the Advancement of Learning in Ireland." Under the powers given by this Act, it was determined to found three Colleges. Belfast, Cork, and Galway, were selected as the sites of these Colleges, and on the 30th day of December, 1845, letters patent were issued, incorporating them. The Presidents and Vice-Presidents of the three Colleges were formed into a Board, called "The Board of Queen's Colleges," for the purpose of drawing up the statutes and arranging the system of education to be pursued in them.

On the 4th of August, 1849, the Professors were appointed, and the Colleges opened for the reception of students on the 30th October, in the same year.

Letters patent, constituting the statutes, were issued on the 11th of December, 1849, and a further charter was issued in the year 1863.

THE COUNCIL OF THE COLLEGE.

The President.

The Vice-President.

C. D. Yonge, M.A., Professor of History and English Literature.

J. Cuning, M.D., Professor of Medicine.

Joseph D. Everett, M.A., D.C.L., Professor of Natural Philosophy

C. MacDonall, LL.D., Professor of Greek.

J. Purser, M.A., Professor of Mathematics.

John Park, M.A., Professor of Logic and Metaphysics.

PROFESSORS.

The Greek Language, . . .	Charles MacDonall, LL.D., M.R.S.A.
The Latin Language, . . .	William Nesbitt, M.A.
History and English Literature, . . .	Charles Duke Yonge, M.A. Oxon.
Modern Languages, . . .	A. L. Meissner, Ph.D.
Mathematics, . . .	John Purser, M.A., M.R.I.A.
Natural Philosophy, . . .	Joseph David Everett, M.A., D.C.L.
Chemistry, . . .	Thomas Andrews, M.D., F.R.S., M.R.I.A., Hon F.R.S.E.
Natural History, . . .	Robert O. Cunningham, M.D., F.L.S.
Logic and Metaphysics, . . .	John Park, M.A.
Civil Engineering, . . .	George Fuller, C.E.
Agriculture, . . .	John F. Hodges, M.D., F.C.S.
Anatomy and Physiology, . . .	Peter Redfern, M.D. Lond., F.R.C.S.
Practice of Medicine, . . .	James Cuning, M.D.
Practice of Surgery, . . .	Alexander Gordon, M.D.
Materia Medica, . . .	James Seaton Reid, M.D.
Midwifery, . . .	R. F. Dill, M.D.
English Law, . . .	Echlin Molyneux, A.M.
Jurisprudence and Political Economy, . . .	T. B. Cliffe Leslie, LL.B.

Appendix,
No. 1.Queen's
College,
Belfast, and
Queen's
University.

OFFICE BEARERS.	
Curator of Museum, . . .	The Professor of Min., Geo., and Nat. Hist.
Registrar, . . .	Rev. Richard Oulton, B.D.
Librarian, . . .	Rev. George Hill.
Bursar, . . .	John Wylie, Esq.

DEANS OF RESIDENCES.

	Appointed.
General Assembly of the Presbyterian Church in Ireland, . . .	Rev. Josias Leslie Porter, D.D., LL.D., 1856
Church of Ireland, . . .	Rev. Samuel B. Busby, LL.D., . . . 1872
Wesleyan Methodists, . . .	Rev. Robinson Scott, D.D., . . . 1873
Irish Association of Non-Subscribing Presbyterians, . . .	Rev. John Scott Porter, . . . 1874

The Deans are designated as they wish themselves to be called.

The students of the College are either Matriculated or Non-matriculated. All the courses for Matriculated students in Arts, including the Department of Civil Engineering, and also in the Faculties of Medicine and of Law, will be found in the Calendar, which is published annually.

Non-matriculated students, on paying the regulated class fees, and signing an engagement to observe order and discipline in the College, are permitted, without undergoing a preliminary examination, to attend any separate course or courses of Lectures; but are not permitted to become candidates for Scholarships or Prizes, or to enjoy other privileges of the Matriculated students.

Students in any of the Faculties can be admitted *ad eundem* from the other Queen's Colleges, or from any University capable of granting degrees.

COLLEGIATE SCHOLARSHIPS.

In the FACULTY OF ARTS—30 Junior Scholarships, of £24 each, are awarded to Undergraduates—15 for proficiency in Literature, and 15 for proficiency in Science; also, 8 Senior Scholarships, of £40 each, to Graduates, one being limited to students who have also completed the course for the degree of LL.B.; and 5 Scholarships, of £20 each, to Engineering Students.

In the FACULTY OF MEDICINE—8 Junior Scholarships, of £25 each, are awarded.

In the FACULTY OF LAW—3 Junior Scholarships, of £20 each, are awarded.

SCHOLARSHIPS AWARDED IN THE SEVERAL FACULTIES, 1874-75.

- 7 Senior Scholarships awarded.
- 22 Junior Scholarships in Arts awarded.
- 3 Engineering Scholarships.
- 8 Medical Scholarships.
- 4 Law Scholarships.

1873-74.

- 8 Senior Scholarships awarded.
- 19 Junior Scholarships in Arts awarded.
- 3 Engineering Scholarships.
- 8 Medical Scholarships.
- 4 Law Scholarships.

By an order of Her Majesty in Council, of 21st May, 1855, applying to the Civil Service, it is ordained that "every person nominated to a junior situation should obtain a certificate of qualification before entering on his duties." The ordinary classes in Queen's College embrace the branches required in the Examinations for the Civil Service, and also in the Examination for students intending to become candidates for commissions in the Royal Artillery and Engineers, and for appointments to the Civil Service of India, both of which are now thrown open to public competition.

QUEEN'S UNIVERSITY IN IRELAND.

The charter founding the Queen's University in Ireland received the Royal sanction in the year 1850, and it provides that its Senate should have the power of conferring upon the students of the Queen's Colleges of Belfast, Cork, and Galway, such degrees and distinctions, in the Faculties of Arts, Law, and Physic, as are granted and conferred in other Colleges and Universities of Great Britain and Ireland. It further ordains that any of the students of the three Queen's Colleges, who shall have obtained such degrees in any of the several Faculties of Arts, Medicine, and Law, as shall be conferred by the Chancellor and Senate of the Queen's University, shall be fully possessed of all such rights, privileges, and immunities, as belong to similar degrees granted by other Universities or Colleges, and shall be entitled to whatever rank and precedence is derived from similar degrees granted by other Universities.

By the charter of the Queen's University, candidates for Degrees in Medicine are required to have attended *at least two courses of Medical Lectures* in some one of the Queen's Colleges. For the remainder of the courses of Medical Lectures, authenticated certificates will be received from the Professors or Lecturers in Universities, Colleges, or Schools, recognised by the Senate of the Queen's University in Ireland.

The Chancellor and Senate also have the power of admitting, by special grace, Graduates of other Universities to similar and equal degrees.

In order to obtain a degree or diploma in the Queen's University it is necessary to enter the College as a Matriculated Student, to pass the entrance or Matriculation Examination, and to pursue a fixed course of study.

The Matriculated Students may be classified as follow:—

I.	Those intending to proceed to the Degrees of A.B. and A.M.
II.	" " Degree of M.D.
III.	" " Diploma of Elementary Law.
IV.	" " Degrees of LL.B. and LL.D.
V.	" " Diploma of Civil Engineering.
VI.	" " Diploma of Surgery.

THE SENATE.

Chancellor.—His Grace the Duke of Leinster, M.A. (Oxon.)

Vice-Chancellor.—Sir Dominic J. Corrigan, Bart., M.D., Physician in Ordinary to the Queen in Ireland.

The Rev. P. Shuldham Henry, D.D., M.B.I.A., President Queen's College, Belfast.

Edward Berwick, B.A., President Queen's College, Galway.

Sir Richard Griffith, Bart., LL.D., M.B.I.A.

Major-General Sir Thomas Aiskew Larcom, R.E., K.C.B., LL.D., F.R.S., M.B.I.A., &c.

James Gibson, A.M., Q.C., M.B.I.A., Barrister-at-Law.

The Right Hon. James Henry Monahan.

The Right Honorable Sir Robert Peel, Bart., M.P.

The Right Reverend the Lord Bishop of Killaloe, D.D.

His Grace the Archbishop of Dublin, D.D.

The Lord Talbot de Malahide, F.R.S., M.B.I.A.

The Lord Clermont, D.L.

Right Honorable Lord Emly.

Right Honorable Lord O'Hagan.

Thomas William Moffett, LL.D., Professor of History, &c., and Logic, Queen's College, Galway.

David Ross, M.A., LL.B.

William K. Sullivan, Ph.D., M.B.I.A., President, Queen's College, Cork.

William MacCormac, M.A., M.D.

Peter Redfern, M.D., F.R.C.S., Professor of Anatomy and Physiology, Queen's College, Belfast.

Maxwell Simpson, M.D., F.R.S., Professor of Chemistry, Queen's College, Cork.

Sir Robert Kane, LL.D., F.R.S.

Rev. R. Scott, D.D., F.R.S., F.R.A.S., Belfast.

Andrew M. Porter, M.A., Q.C.

Secretary.—G. Johnstone Stoney, M.A., F.R.S., F.R.A.S.—Office, Dublin Castle.

The Senate holds its sitting in Dublin Castle, where the examinations of the students of the three Colleges, for Graduation and University Exhibitions, are annually conducted by Examiners appointed by the Senate from year to year.

Appendix,
No. 1.

Queen's
College,
Belfast, and
Queen's
University.

APPENDIX, No. 2—continued.

RETURN of the NUMBER of STUDENTS attending each CLASS in the Queen's College, Belfast, in each Year—continued.

CLASS.	SESSION.													
	1882, 1883.	1883, 1884.	1884, 1885.	1885, 1886.	1886, 1887.	1887, 1888.	1888, 1889.	1889, 1890.	1890, 1891.	1891, 1892.	1892, 1893.	1893, 1894.	1894, 1895.	
Greek—1st year,	63	66	79	63	49	47	43	41	37	37	26	46	45	
" 2nd "	63	44	40	49	21	19	24	11	22	19	18	18	22	
" Higher,	7	9	12	6	4	5	8	7	6	6	7	6	6	
Latin—1st year,	63	66	78	64	50	48	43	44	39	37	36	42	43	
" 2nd "	60	40	33	44	40	54	37	32	32	21	26	31	40	
" Higher,	6	6	7	4	6	7	9	11	6	7	8	10	6	
The English Language,	83	70	80	67	49	46	43	45	37	36	37	46	44	
History,	8	6	4	4	5	9	6	16	12	19	16	14	9	
English Literature,	41	52	46	42	52	41	32	35	39	27	25	23	25	
Modern Languages (French, Ger- man, Italian),	110	99	110	115	109	115	96	94	92	98	95	103	108	
Senior "	43	26	36	38	46	38	32	52	37	30	36	38	47	
The Celtic Languages,	The Lectures on each Session open to the Public.													
Mathematics—1st year,	102	85	92	75	62	56	66	57	44	50	48	57	47	
" 2nd "	15	20	17	19	12	22	34	22	17	10	9	13	12	
" Higher,	5	8	4	4	6	35	7	8	6	6	4	2	3	
Nat. Philosophy—Higher Class,	—	—	5	4	—	9	3	7	3	4	4	3	4	
" Mathematical Physics, &c.	72	89	60	68	50	51	46	53	46	32	31	39	46	
" Experimental Physics,	94	95	87	120	104	90	65	76	88	90	76	102	124	
Natural Philosophy applied,	2	5	6	7	4	9	10	5	3	5	3	5	7	
Chemistry,	89	61	93	95	91	64	86	84	105	103	93	109	111	
Practical Chemistry,	24	28	44	57	44	51	44	30	44	43	42	56	46	
Laboratory,	15	6	14	16	16	16	17	15	16	17	16	19	18	
Zoology,	60	90	62	64	92	83	75	57	75	75	73	76	87	
Botany,	63	90	52	27	50	51	60	38	69	61	66	60	89	
Physical Geography,	7	—	—	—	—	—	—	—	—	—	—	—	—	
Logic,	65	57	49	68	52	43	46	38	40	29	32	31	43	
Metaphysics,	34	40	40	41	39	29	33	30	20	14	16	22	17	
Higher Logic,	12	25	14	24	33	32	31	15	15	9	7	12	3	
Mineralogy and Geology,	10	12	14	15	5	11	6	10	5	8	10	13	8	
Engineering, 1st year,	11	15	15	14	12	8	13	11	5	12	13	14	5	
Engineering, 2nd year, { lectures,	11	8	12	10	8	10	4	9	8	3	4	7	5	
{ practice,				9	6	10	4	9	6	3	4	7	5	
Engineering, 3rd year, { lectures,	3	7	7	7	7	6	9	3	3	6	6	3	6	
{ practice,				7	7	5	8	10	5	3	8	6	3	8
Theory of Agriculture,	6	—	—	—	—	—	—	—	—	—	—	—	—	
Practice of Agriculture,	—	—	—	—	—	—	—	—	—	—	—	—	—	
Diseases of Farm Animals,	—	—	—	—	—	—	—	—	—	—	—	—	—	
Medical Jurisprudence,	16	25	30	28	35	33	55	34	41	37	36	53	47	
Anatomy,	85	67	99	109	127	120	130	117	142	136	134	135	147	
Practical Anatomy,	91	66	128	124	149	159	160	140	182	157	168	174	191	
Practice of Medicine,	27	36	44	48	67	70	57	59	88	57	50	59	53	
Practice of Surgery,	55	46	48	55	77	81	75	61	72	55	61	64	63	
Materia Medica,	37	29	36	47	47	58	46	38	49	43	52	47	51	
Midwifery,	22	34	19	23	36	37	48	41	45	46	39	26	37	
Law of Property,	12	12	14	19	13	20	17	34	27	21	36	27	22	
Equity and Bankruptcy,														
Common and Criminal Law,														
Evidence and Pleading,														
Political Economy, Arts,														
Civil Law; Constitutional,	19	17	20	15	16	8	10	14	13	9	8	12	15	
Colonial, and International	11	10	11	19	11	18	19	20	25	17	23	23	20	
Law; Jurisprudence,														
Arabic,	—	—	—	—	—	—	—	—	—	—	—	—	—	
Hindustani,	3	—	—	—	—	—	—	—	—	—	—	—	—	
Sanskrit,	5	4	4	—	—	—	—	—	—	—	—	—	—	
Operative Surgery,	17	2	—	16	23	12	10	17	18	23	25	36	29	

APPENDIX,

RETURN of the AMOUNT of FEES received by each

Appendix,
No. 3.
Return of
amount of
Fees.

Professor of	1849-50.	1850-51.	1851-52.	1852-53.	1853-54.	1854-55.
Greek,	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.
Latin,	*88 10	83 0	50 0	27 5	38 5	46 5
English History and Literature.	*73 15	79 0	50 10	31 5	38 5	44 5
Logic and Metaphysics, .	50 5	50 5	47 10	31 5	48 5	45 5
Mathematics,	6 0	-	350 5	34 5	37 15	41 0
Natural Philosophy, . . .	116 15	97 10	69 15	43 0	54 10	59 0
Chemistry,	79 5	70 15	99 10	47 0	73 15	76 15
Practical Chemistry, . . .	85 5	104 0	117 5	51 10	111 10	131 15
Anatomy and Physiology, .	143 0	170 0	195 15	250 10	228 0	250 0
Practical Anatomy,	20 10	69 0	70 15	50 15	55 0	78 15
Natural History & Botany, .	97 0	84 0	63 0	50 0	61 0	85 0
Modern Languages,	-	7 10	24 15	17 15	29 15	18 0
Mineralogy and Geology, .	20 0	21 0	35 15	18 15	23 0	14 10
Jurisprudence and Political Economy, .	32 0	29 0	37 0	23 0	20 0	16 0
English Law,	16 0	24 10	22 0	14 0	17 15	21 0
Civil Engineering,	15 10	41 0	49 5	22 0	46 0	32 15
Agriculture and Medical Jurisprudence,	17 0	31 0	32 0	18 0	30 0	30 0
Practice of Medicine, . . .	41 0	21 10	36 0	51 0	43 0	45 0
Surgery,	22 0	30 0	26 0	29 0	33 0	43 0
Materia Medica,	23 0	18 0	22 0	27 0	31 0	33 0
Midwifery,	-	-	-	-	-	-
Teacher of Drawing, . . .	-	-	-	-	-	-
Professor of	1855-56.	1856-57.	1857-58.	1858-59.	1859-60.	1860-61.
Greek,	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.
Latin,	†137 15	†221 0	233 10	212 0	131 0	121 0
English History and Literature,	185 15	211 0	230 10	202 0	167 0	162 0
Logic and Metaphysics, . .	164 5	163 10	182 10	131 10	143 10	130 10
Mathematics,	134 10	173 10	143 0	103 10	104 10	140 10
Natural Philosophy,	311 5	291 0	208 0	173 0	143 0	136 0
Chemistry,	194 10	163 0	106 0	208 0	198 0	102 0
Practical Chemistry,	216 5	213 10	204 10	262 0	277 10	299 0
Anatomy and Physiology, .	†425 10	†453 10	567 10	544 0	643 14	682 8
Practical Anatomy,	130 5	157 0	170 0	144 0	154 0	165 0
Natural History & Botany, .	276 15	231 0	278 0	247 0	268 0	280 0
Modern Languages,	20 10	22 0	25 0	24 0	9 0	29 0
Mineralogy and Geology, .	37 10	38 0	51 0	51 0	46 0	37 0
Jurisprudence and Political Economy, .	21 0	10 0	20 0	25 0	23 0	35 0
English Law,	79 0	03 0	97 0	79 0	68 0	70 0
Civil Engineering,	**56 15	48 0	55 0	40 0	67 0	63 0
Agriculture and Medical Jurisprudence,	48 0	59 0	74 0	77 0	103 0	103 0
Practice of Medicine,	58 11	73 0	82 0	94 0	137 0	144 0
Surgery,	70 0	50 0	73 0	83 0	86 0	71 0
Materia Medica,	35 0	66 0	56 0	42 0	64 0	72 0
Midwifery,	-	-	-	-	-	-
Teacher of Drawing,	-	-	-	-	-	-

* In the Session of 1849-50, Medical Students were required to attend the Greek and Latin Classes, but have since been exempt from attending either class.

† Besides for Sanskrit and Hindustani, 1859-60, £45; 1860-61, £22 10s.; 1861-62, £23; 1862-63, £32 10s.; 1863-64, £20; 1864-5, £20.

‡ Besides for Arabic in 1859-60, £5.

Queen's College, Belfast, October, 1875.

No. 3.

Professor in the Queen's College, Belfast, in each Year.

Appendix,
No. 2.Return of
Amount of
Fees.

1855-56.	1856-57.	1857-58.	1858-59.	1859-60.	1860-61.	1861-62.	Professor of
£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	
51 15	44 15	51 0	78 0	†93 5	†131 15	†136 0	Greek.
47 15	39 15	53 0	67 0	†90 0	127 15	135 0	Latin.
59 5	45 15	57 10	69 0	94 15	117 5	155 10	English History and Literature.
41 15	48 5	46 15	68 10	39 0	58 10	106 5	Logic and Metaphysics.
60 10	62 15	69 10	97 10	130 10	168 0	163 5	Mathematics.
59 10	62 15	72 0	68 10	61 5	180 10	173 15	Natural Philosophy.
105 10	138 0	113 10	147 5	184 0	167 0	195 15	{ Chemistry.
							{ Practical Chemistry.
							{ Anatomy and Physiology.
250 0	101 0	206 0	262 10	307 0	427 10	1432 10	{ Practical Anatomy.
59 10	56 0	52 10	105 5	94 10	70 0	56 10	Natural History & Botany.
74 0	86 0	96 0	130 0	159 10	277 0	319 5	Modern Languages.
12 10	37 0	20 5	21 15	24 15	11 10	16 5	Mineralogy & Geology.
25 5	22 10	31 15	28 10	36 10	28 10	25 15	Jurisprudence & Political Economy.
21 0	27 0	21 0	25 0	28 0	28 0	25 0	English Law.
13 10	27 0	32 0	22 15	24 15	32 0	40 15	Civil Engineering.
28 0	25 10	40 5	31 5	47 0	43 0	**44 0	Agriculture & Medical Jurisprudence.
56 0	43 10	36 0	57 0	44 0	37 0	64 10	Practice of Medicine.
74 0	42 10	34 0	48 0	65 10	79 13	84 12	Surgery.
45 0	30 0	34 0	39 0	50 0	69 0	69 0	Maternal Medicine.
44 0	31 0	12 0	28 0	35 0	48 0	63 0	Midwifery.
-	32 0	25 0	35 0	22 0	-	-	Teacher of Drawing.
1868-69.	1869-70.	1870-71.	1871-72.	1872-73.	1873-74.	1874-75.	Professor of
£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	
127 0	160 0	114 0	103 0	104 0	123 0	122 0	Greek.
155 0	154 0	132 0	100 0	119 0	149 0	158 0	Latin.
107 10	121 0	128 0	102 0	90 0	100 10	101 10	English History and Literature.
159 10	117 0	96 10	70 0	71 10	68 0	74 10	Logic and Metaphysics.
132 0	146 0	117 0	106 0	107 0	123 0	111 0	Mathematics.
183 0	177 0	164 0	107 0	164 0	208 0	296 0	Natural Philosophy.
284 10	249 10	276 0	324 0	300 10	326 10	313 10	{ Chemistry.
							{ Practical Chemistry.
							{ Anatomy and Physiology.
731 18	532 1	697 17	706 10	749 12	725 5	838 8	{ Practical Anatomy.
133 0	104 0	142 0	128 0	136 0	135 0	164 0	Natural History & Botany.
245 0	255 0	238 0	244 0	248 0	284 0	300 0	Modern Languages.
7 0	16 0	20 0	18 0	19 0	20 0	12 0	Mineralogy & Geology.
40 0	56 0	65 0	39 0	54 0	73 0	53 0	Jurisprudence & Political Economy.
31 0	43 0	56 0	34 0	58 0	60 0	45 0	English Law.
78 0	08 0	51 0	60 0	48 0	54 0	53 0	Civil Engineering.
68 0	61 0	73 0	77 0	77 0	64 0	90 0	Agriculture & Medical Jurisprudence.
92 0	96 0	103 0	94 0	87 0	99 0	88 0	Practice of Medicine.
131 0	115 0	134 0	113 0	127 0	128 0	110 0	Surgery.
89 0	73 0	77 0	84 0	98 0	81 0	98 0	Maternal Medicine.
93 0	78 0	79 0	94 0	74 0	54 0	78 0	Midwifery.
-	-	-	-	-	-	-	Teacher of Drawing.

§ Professor McCosh was appointed in Session 1851-52, and taught and received fees from Students properly belonging to the previous Session.

[The Professor of Anatomy pays to his Demonstrator a portion of the fees for Practical Anatomy.

** No endowment for Medical Jurisprudence. Professor Hodges delivers the lectures, receiving only class fees.

JOHN WYLLIE, *Bursar.*

B 2

APPENDIX, No. 4.

Appendix,
No. 4.
Expenditure of One
Year's
Additional
Grant.

ACCOUNT of the EXPENDITURE of ONE YEAR'S ADDITIONAL GRANT
to the Queen's College, Belfast, ending 31st March, 1874.

1. Library of Ancient and Modern Literature and Philology:		£ s. d.	£ s. d.
Ancient Classical Languages and Philology,		15 3 8	
English History and Literature,		23 14 8	
Foreign Modern Languages,		17 4 3	
Works of General Interest, &c.,		94 13 3	
			150 17 10
2. Libraries, Museum, &c., Mathematical, Physical, and Chemical Sciences:			
Mathematical Library,		20 14 6	
Physical Library,		15 14 1	
Chemical Library,		13 5 0	
Museum and Cabinet of Physical Science,		34 7 6	
,, Laboratory, Chemical Science,		41 8 0	
			125 9 1
3. Libraries, Museum, and Collection of Objects of the Department of the Natural Sciences:			
Library of Natural History, and Geology and Mineralogy,		28 0 2	
Museum of Natural History, and Geology and Mineralogy,		49 15 8	
			77 15 10
4. Libraries, Museums, and Collections of Objects of the Department of Engineering:			
Library of Engineering,		7 15 9	
Instruments and Collections of Engineering,		19 17 6	
			27 13 3
5. Museum and Library of Medical Science:			
Library of Medical Works,		49 7 3	
Anatomical and Pathological Museums, &c.,		57 5 7	
Surgical Museum,		8 0 0	
Medical Jurisprudence,		14 18 3	
Midwifery,		—	
Prac. of Medicine,		0 8 6	
			129 19 7
6. Library of Metaphysical, Legal, and Economical Science:			
Law, Jurisprudence, and Political Economy,		19 11 5	
Metaphysics,		14 18 9	
			34 19 2
7. Printing, Stationery, Advertising, Postages, Office Expenses, &c.,			
		—	324 12 7
8. Heating and Lighting,			
		—	150 19 3
9. Grounds,			
		—	101 14 11
Balance in Bank of Ireland Office, 31st March, 1874,		—	352 19 8
Total,			1,476 12 2
Amount of One Year's additional Grant,			1,000 0 0
College and Matriculation Fees,			122 2 0
Balance in Bank, 31st March, 1873,			354 10 2
Total,			1,476 12 2

The Accounts of the College up to 31st March, 1874, have been examined and found correct by the Commissioners for Auditing the Public Accounts.

October, 1875.

JOHN WYLLIE, *Barrister*.

APPENDIX, No. 5.

GENERAL CLASS EXAMINATIONS, QUEEN'S COLLEGE, BELFAST.

	Session 1873-74.			A.M.	P.M.	Session 1874-75.			A.M.	P.M.
The English Language,	Saturday,	January	26	—	12—4	Saturday,	January	9	—	12—4
Logic,	Saturday,	January	30	8—12	—	Saturday,	January	20	8—12	—
Mineralogy and Geology, and Physical										
Geography,	Friday,	February	28	12—1	—	Friday,	February	12	12—1	—
Zoology,	Saturday,	February	21	9—12	—	Saturday,	February	26	10—1	—
Metaphysics,	Thursday,	March	23	8—12	and 2—5	Thursday,	March	22	8—12	and 2—5
English Literature,	Wednesday,	April	1	9—12	and 2—5	Wednesday,	March	24	9—12	and 2—5
History,	Thursday,	April	8	8—12	—	Thursday,	March	25	8—12	—
Practical Anatomy,	Saturday,	April	20	9—12	—	Saturday,	April	24	9—12	—
Anatomy and Physiology,	Monday,	April	27	—	2—5	Monday,	April	23	9—12	and 2—5
Practices of Medicine,	Thursday,	April	26	9—12	and 2—5	Thursday,	April	27	9—12	—
Medical Jurisprudence,	Thursday,	April	26	8—12	—	Thursday,	April	27	9—12	—
Practices of Surgery,	Thursday,	April	26	—	2—5	Thursday,	April	27	—	2—5
Natural Philosophy,	Thursday,	June	3	8—12	and 2—5	Thursday,	June	1	9—12	and 2—5
Greek (First Year),	Wednesday,	June	2	8—12	—	Wednesday,	June	8	9—12	—
“ (Second Year),	Thursday,	June	4	9—12	—	Thursday,	June	9	9—12	—
Latin (First Year),	Thursday,	June	4	8—12	—	Thursday,	June	9	8—12	—
“ (Second Year),	Wednesday,	June	3	9—12	—	Wednesday,	June	8	9—12	—
English Literature, 1st, 2nd, and 3rd years,	Thursday,	June	4	8—12	—	Thursday,	June	2	8—12	—
Classical and Modern History,	Wednesday,	June	3	—	2—5	Wednesday,	June	4	—	2—5
Mathematics,	Friday,	June	5	9—12	and 2—5	Friday,	June	4	9—12	—
Modern Languages,	Saturday,	June	6	8—12	—	Saturday,	June	5	8—12	—
Chemistry,	Monday,	June	8	9—12	—	Monday,	June	7	9—12	—

of Queen's College, Belfast.

General Examinations of Students in Law and in Political Economy, and of Students attending Lectures—Theory, Practical Chemistry, Medical Jurisprudence, Military and Topographical the class of the Lectures respectively.

APPENDIX,

RETURN of the NUMBER of LECTURES delivered by each

	1850, 1851	1850, 1851	1851, 1852	1852, 1853	1853, 1854	1854, 1855	1855, 1856	1856, 1857	1857, 1858	1858, 1859	1859, 1860	1860, 1861	1861, 1862	1862, 1863
Professor of—														
Greek,	185	232	244	248	236	240	234	235	236	250	500*	460*	440*	560*
Latin,	162	197	218	221	189	196	202	230	230	275	336	234	234	234
History and English Literature,	35	55	98	91	104	100	105	105	99	110	123	92	154	146
Modern Languages, .	208	330	324	307	306	303	319	340	369	307	340	372	372	369
Celtic,	6	6	6	8	8	8	6	6	8	6	6	6	—	—
Mathematics, . . .	135	256	333	248	246	320	348	322	330	400	400	370	370	316
Natural Philosophy	122	257	333	309	356	250	255	307	300	300	242	242	213	182
Chemistry,	134	136	137	129	132	130	138	142	142	140	132	132	132	132
Practical Chemistry	36	36	36	36	36	36	36	36	34	36	36	36	36	36
Natural History, .	120	120	133	137	139	138	142	140	143	140	140	140	140	140
Mineralogy and Geology,	<i>same</i>	88	54	59	54	55	49	59	52	52	52	52	52	52
Logic & Metaphysics	—	—	78	142	176	173	164	177	179	167	140	156	194	208
Civil Engineering, .	134	138	140	136	140	138	147	118	100	194	196	220	196	228
Agriculture, . . .	172	206	205	212	209	213	218	186	190	160	160	156	156	50
Anatomy and Phy- siology,	115	116	115	115	114	115	117	113	115	115	115	112	108	108
Practice of Medicine,	93	93	92	92	93	94	94	85	75	95	95	95	95	95
Practice of Surgery,	93	94	93	91	91	92	94	94	94	94	94	94	94	93
Materia Medica, . .	92	91	91	93	90	90	92	80	84	84	84	84	84	84
Midwifery,	92	92	92	91	90	93	93	93	93	95	90	80	80	76
English Law, Jurisprudence & Po- litical Economy, . .	24	48	72	90	96	96	90	6	96	96	72	72	98	95
	24	48	96	120	120	120	120	120	120	96	120	120	120	120

The above Return gives the number of Meetings of one hour each, in each Class. The system course; in some classes these examinations are held daily; in others on fixed days of the week.

The Professors also conduct the General Scholarship Examinations; and some of them, in

* Including about 110 on

No. 6.

Professor in the Queen's College, Belfast, in each YEAR.

1863, 1864.	1864, 1865.	1865, 1866.	1866, 1867.	1867, 1868.	1868, 1869.	1869, 1870.	1870, 1871.	1871, 1872.	1872, 1873.	1873, 1874.	1874, 1875.	REMARKS.
350	350	350	350	340	300	800	300	300	300	300	300	
230	324	324	324	319	319	319	330	320	320	320	320	
140	167	167	167	148	148	148	150	150	150	150	150	Besides correcting about 600 exercises.
356	356	356	406	406	406	406	400	400	400	400	400	
-	-	-	-	-	-	-	-	-	-	-	-	Open to the Public without charge.
325	330	317	317	296	298	296	300	300	300	300	300	Besides three hours each week on which the Senior Scholar meets the Junior Division.
180	180	190	190	288	288	288	300	300	300	300	300	In addition, arranging apparatus, which occupies as much time as the lectures.
130	130	130	130	130	130	130	130	130	130	130	130	In addition, superintending the working pupils, of whom from eight to twelve are admitted each year by examination to the laboratory without charge.
36	36	55	55	55	55	55	55	55	50	50	50	In addition, superintending the working pupils, of whom from eight to twelve are admitted each year by examination to the laboratory without charge.
140	140	140	140	140	140	140	140	140	140	140	140	In addition, superintending the working pupils, of whom from eight to twelve are admitted each year by examination to the laboratory without charge.
52	52	52	52	52	52	52	52	52	52	52	52	In addition, superintending the working pupils, of whom from eight to twelve are admitted each year by examination to the laboratory without charge.
195	195	195	195	195	195	195	195	195	195	195	195	In addition, superintending the working pupils, of whom from eight to twelve are admitted each year by examination to the laboratory without charge.
819	236	247	247	247	247	247	230	230	230	230	230	In addition, superintending the working pupils, of whom from eight to twelve are admitted each year by examination to the laboratory without charge.
50	50	41	41	35	35	35	35	35	34	34	34	In addition, superintending the working pupils, of whom from eight to twelve are admitted each year by examination to the laboratory without charge.
224	261	260	260	260	260	260	260	260	260	260	260	In addition, superintending the working pupils, of whom from eight to twelve are admitted each year by examination to the laboratory without charge.
95	95	95	95	95	95	95	95	95	95	95	95	In addition, superintending the working pupils, of whom from eight to twelve are admitted each year by examination to the laboratory without charge.
93	93	93	93	93	93	93	93	93	93	93	93	In addition, superintending the working pupils, of whom from eight to twelve are admitted each year by examination to the laboratory without charge.
84	84	84	84	80	80	80	80	80	77	77	77	In addition, superintending the working pupils, of whom from eight to twelve are admitted each year by examination to the laboratory without charge.
76	76	76	76	76	76	76	76	76	44	44	44	In addition, superintending the working pupils, of whom from eight to twelve are admitted each year by examination to the laboratory without charge.
96	96	96	96	96	96	96	96	96	96	96	96	In addition, superintending the working pupils, of whom from eight to twelve are admitted each year by examination to the laboratory without charge.
120	120	120	120	120	120	120	120	120	120	120	120	In addition, superintending the working pupils, of whom from eight to twelve are admitted each year by examination to the laboratory without charge.

of instruction includes, not merely formal Lectures, but also examination in the business of the according to the nature of the subject.

In addition, the Matriculation and Supplemental Examinations.

Sanskrit and Hindustani.

ORDERED EXAMINATIONS of Queen's College, Belfast, 1874.

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Appendix to Report of the President

Days	Hours	First Year Subjects	Second Year Subjects	Third Year Subjects	Fourth Year Subjects
Tuesday, Oct. 14.	9-12		Engl. Lit. { English, Hist. Lang. Math.	Engl. Lit. — Hist. Lang., Math., Hist. Phil., Chem.	Senior School — Latin.
	2-4		Engl. Lit. — Greek, Latin, English.	Engl. Lit. — Greek, Latin, Logic, English.	Senior School — Latin.
Wednesday, Oct. 15.	9-12		Latin School — Greek.		Senior School — Greek.
	2-4		Latin School — Greek.		Senior School — Greek.
Thursday, Oct. 16.	9-12		Med. English. { School — Chem.		Senior School — Chem.
	2-4	Maths. — Math.	Med. English. { School — Chem.		Senior School — Chem.
Friday, Oct. 17.	9-12	Maths. — Greek, Latin.			
	2-4				
Saturday, Oct. 18.	9-12	Maths. — English, in Arts only.			Senior School — Med. Phil.
	2-4	Maths. — English, in Medicine, &c.			Senior School — Med. Phil.

Monday, Oct. 18.	8-10		Med. School.—Anatomy.	Engin. School.—Chem. and Phys. Lab.	Law School.—Hist. Nat.
	1-4	State of Matriculated Students to be made out.	Med. School.—Physiology. Law School.—English.		Law School.—Hist. Nat.
Tuesday, Oct. 19.	8-10	Science: Math. English.	Science: English.	Engin. School.—Math.	Law School.—Math.
	1-4	Science: Math. English.	Science: Latin. Med. School.—Anat. and Phys.	Engin. School.—Math. Med. School.—Chem. and Phys.	Law School.—Hist. Nat. Med. School.—Phys. of Man.
Wednesday, Oct. 20.	8-10			Med. School.—Phys. Chem.	Law School.—Hist. Nat. Med. School.—Phys. of Man.
	1-4	Liberal Nat.	Engin. School.—Phys. Phys.	Engin. School.—Hist. Nat.	Law School.—Hist. Nat.
Thursday, Oct. 21.	8-10	Liberal Nat.	Liberal School.—Latin. Engin. School.—Gen. Chem.	Engin. School.—G. English. Med. School.—Hist. Nat.	Med. School.—Hist. Nat. Law School.—Hist. Nat.
	1-4	Liberal Nat.	Liberal School.—Latin. Engin. School.—Gen. Chem.	Engin. School.—G. English.	Law School.—Hist. Nat. Med. School.—Phys. of Man.
Friday, Oct. 22.	8-10	Liberal Nat.	Liberal School.—Med. Lab.		Law School.—Hist. Nat. Med. School.—Phys. of Man.
	1-4	Liberal Nat.	Liberal School.—Med. Lab.		Law School.—Hist. Nat. Med. School.—Phys. of Man.

Students (posting the Supplies every) Examination complete the previous year, and take each accordingly.

Hours of Lectures,--Session 1874-75.

Week.	Lectures			Other Demonstrations			Exercises		
	1st Year	2nd Year	3rd Year	1st Year	2nd Year	3rd Year			
1	French. Monday Wednesday Thursday Friday	Mathematics. Monday Tuesday Wednesday Thursday Friday		French. Monday Tuesday Wednesday Thursday Friday	Mathematics. Monday Tuesday Wednesday Thursday Friday				
2	Mathematics. Monday Tuesday Wednesday Thursday Friday	French. Monday Tuesday Wednesday Thursday Friday	Other Classes.	Mathematics. Monday Tuesday Wednesday Thursday Friday					
3	Latin. Monday Wednesday Friday	Other Subjects. Monday Tuesday Wednesday Thursday Friday	Other Subjects. Monday Tuesday Wednesday Thursday Friday	Other Subjects. Monday Tuesday Wednesday Thursday Friday	Mathematics. Monday Tuesday Wednesday Thursday Friday	Other and Field Work. Tuesday Thursday	Other Subjects. Monday Tuesday Wednesday Thursday Friday	Other Subjects. Monday Tuesday Wednesday Thursday Friday	Other Subjects. Monday Tuesday Wednesday Thursday Friday
4	French. Monday Wednesday Friday	Latin. Monday Tuesday Wednesday Thursday Friday	Mathematics. Monday Tuesday Wednesday Thursday Friday	Other Subjects. Monday Tuesday Wednesday Thursday Friday	Mathematics. Monday Tuesday Wednesday Thursday Friday	Other and Field Work. Tuesday Thursday	Other Subjects. Monday Tuesday Wednesday Thursday Friday	Other Subjects. Monday Tuesday Wednesday Thursday Friday	Other Subjects. Monday Tuesday Wednesday Thursday Friday

1st Year	English Monday Wednesday Friday	Greek Monday Wednesday Friday	Lat. to Mar. Monday Tuesday Wednesday Friday	Class. Eng. Monday Wednesday	Fris. Police Tuesdays Thursdays	Lat. to Mar. Monday Tuesday Wednesday Friday	Organic Monday Tuesday Wednesday Thursday	
2nd Year	English Monday Tuesday Wednesday Friday	Logic Monday Wednesday Thursday Friday	Lat. to Mar. Monday Tuesday Wednesday Friday		Class. and Math. Eng. Monday Wednesday		Arithmetic Monday Tuesday Wednesday Thursday Friday	Explanation on Friday at 4 o'clock.
3rd Year			Chemistry Monday Tuesday Wednesday Thursday Friday	Chemistry Monday Tuesday Wednesday Thursday Friday	Field Work and Engineering Exercises and additional lectures for 1st and 2nd years. Students are usually on Friday and Saturday also work hours.	Chemistry Mon. Tues. Wed. Thurs. Fri.	Arithmetic Monday Tuesday Thursday	
4th Year			Chemical Laboratory open from 9 a.m. till 5 p.m.				Arithmetic Monday Tuesday Wednesday Thursday	Physics Monday Tuesday Wednesday Thursday

Practical Chemistry.—Demonstrations, Tuesday, Thursday, 10 to 12 p.m. Laboratory, Monday, Wednesday, Friday, 10 to 12, or 2 to 4, after June 1, 1916. Physics, Tuesday, Thursday, 1 to 2		Lectures.—Lectures, Monday, Tuesday, Wednesday, Thursday, Friday, 11 to 12 p.m. Demonstrations on Wednesdays. Experimental Physics, Monday, Wednesday, Friday, 1 to 2 p.m. Special Investigations, Monday, Tuesday, Wednesday, Thursday, 2 to 3 Arithmetic, Monday, Tuesday, Wednesday, Thursday, 3 to 4	
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FACULTY OF LAW.—HOURS OF LECTURES.									
1st Year		2nd Year			3rd Year		4th Year		
Law of Property. Monday Wednesday Friday	Constitutional Law. Monday Wednesday Friday	Law of Torts. Monday Wednesday Friday	Law of Contracts. Monday Wednesday Friday	Law of Crimes. Monday Wednesday Friday	Law of Evidence. Monday Wednesday Friday	Law of International Law. Monday Wednesday Friday	Law of Admiralty. Monday Wednesday Friday	Law of Arbitration. Monday Wednesday Friday	Law of Insurance. Monday Wednesday Friday

APPENDIX No. 7.

A GENERAL DIGEST of SUBJECTS and COURSES pursued in
Queen's College, Belfast.

I. FACULTY OF ARTS.

Students intending to proceed to the degree of B.A. must pass the matriculation examination before entering upon their college studies. This examination is prescribed by the College Council, and embraces the first and second books of Euclid, arithmetic, the elementary rules of algebra and simple equations, translation from two Greek and two Latin authors, Latin prose composition, English grammar and composition, English history, and the outlines of ancient and modern geography. Candidates for literary and science scholarships of the first year are examined in more extensive courses of literature and science. In 1875 the subjects prescribed for these literary scholarships were, in Greek, four books of the *Iliad* of Homer, the *Ion* of Euripides, portions of the *Anabasis* of Xenophon, selections from Lucian, with an exercise in prose composition; and in Latin, the *Odes* of Horace, six books of the *Æneid* of Virgil, and portions of Cicero and Livy, with Latin prose composition. Candidates had also to translate from Greek and Latin passages not contained in the prescribed books. They were also examined in English composition, Roman history, and the histories of England and France, from A.D. 1066 to A.D. 1509. The subjects prescribed for science scholarships of the first year embraced Euclid, books 1, 2, 3, 4, and 6, with the definitions of the fifth book, geometrical exercises, algebra to the end of quadratic equations, including the binomial theorem, and the first principles of logarithms; and plane trigonometry.

In the first session of the undergraduate course in arts the students must attend lectures and examinations in mathematics, Greek, Latin, modern languages, and English. In certain classes it has been found difficult to carry on the work of instruction from some of the students being more advanced in knowledge than others; but this has been to some extent obviated by calling in the aid of the senior scholars. At the end of the session a general examination is held in each class, which must be passed by the student before he is permitted to enter upon the studies of the second year. The same remark applies to the other years of the undergraduate course.

As the scholarships awarded after matriculation are trouble for one year only, scholarship examinations are held at the beginning of the second year, which are open to all students who have completed the first year of the undergraduate course. These examinations embrace more extended courses of literature and science than those prescribed for the first year's scholarships. In the second session the student is required to attend a course of logic and another of natural philosophy, together with second courses of instruction on any two of the following subjects: Mathematics, Greek, Latin, and a Continental language.

Students intending to proceed to the degree of B.A. must present themselves in Dublin for the first university examination, unless prevented by illness or other unavoidable cause. The subjects of this examination prescribed for 1875 were: In Greek, Euripides—*Alceste*; Xenophon—*Memorabilia*, book II. In Latin, Horace—*Odes*; Cicero—*Ad Familiares* I, II, III, with prose composition in both languages. In modern languages, translation from two modern authors, either French, German, or Italian, with an exercise from English into the language selected. In mathematics, Euclid, books 1 to 4, book 6, and definitions of fifth book, arithmetic, algebra to the end of quadratic equations, together with the binomial theorem, geometrical and arithmetical progression, the nature and use of logarithms, and plane trigonometry to the end of the solution of triangles. In mathematical physics, mechanics, hydrostatics, optics, and elements of astronomy. Candidates for honors at the same examination are required to answer in formal logic as well as in the subjects of the pass course. They are afterwards examined in a more extended course of literature or science.

For the third session, the following subjects are prescribed: 1, English literature; 2, metaphysics, or history, or political economy; 3, chemistry; 4,

zoology or botany. Students are at the same time not obliged to adhere strictly to this course, but are permitted to substitute for any one or two of the above subjects, honor courses on subjects taught in the undergraduate course. This permission is largely used, and honor courses are delivered by many of the professors.

At the end of the third year students are permitted to present themselves for the final degree examination of the Queen's University. The details of this examination will be found in the Queen's University Calendar for 1875, p. 40, and in the Belfast Queen's College Calendar for the same year, p. lxxi. For the degree of Master of Arts any bachelor of arts of one year's standing may offer himself for examination.

*Appendix,
No. 1.
—
Digest
of Subjects
and
Courses.*

MEDICAL DEPARTMENT.

The medical students of this College pass through a rigorous training before they can acquire the degree of M.D. from the Queen's University. In the matriculation examination a knowledge of Latin, Greek, History, Arithmetic, Algebra, two Books of Euclid, &c., is required, and it is not uncommon that several trials have to be made before a sufficient standard is attained.

Many of the subjects of the medical course serve also as a means of mental training:—for instance, the attendance on lectures and examinations on the subjects of Modern Languages, Experimental Physics, Botany, Zoology, and Chemistry, and the University test of the knowledge acquired, are such as is generally admitted, it is desirable to add to the required study of Classics and Mathematics for Arts degrees.

Thus every medical undergraduate must submit to an efficient training in non-professional subjects. He is guided during his proper medical studies by the ordinary curriculum of study, but in addition he almost uniformly extends his study of many of these subjects, as a glance at the numbers attending the classes on different subjects will show. The fact that many of the Professors are also University examiners enables them to secure much greater devotion to the subjects of study, and to exact a much more extensive knowledge of each than could possibly be required by examiners unacquainted with the character of the training through which each Candidate for a degree had passed.

The attendance at classes is recorded daily in roll-books which are regularly inspected by the College Council; explanation is required of every absence from a class, and the required certificates are withheld whenever the attendance has been so deficient as to have imperilled the acquisition of a knowledge of any subject of study. The University examinations are conducted, in the most practical and laborious manner in dissecting-rooms, hospitals, &c., and every security is thus given that none but well-qualified Candidates are presented for graduation.

ENGINEERING DEPARTMENT.

The regular or ordinary course for Students of Civil Engineering in this College extends over three Sessions, and includes attendance on Mathematics, Experimental and Mathematical Physics, Chemistry; a course of Mineralogy, Geology, and Physical Geography, and Modern Languages, especially French, together with the various courses conducted by the Professor of Civil Engineering, which may be thus sketched out:—1. Geometrical Drawing, including the general principles of the accurate representation on flat surfaces of the forms and dimensions of solid objects, and including the art of perspective, together with practical drawing, especially in relation to engineering and architectural subjects. 2. Surveying, Levelling, and Mensuration, including various operations of field work in measuring over the surface of land, and of office work in mapping, drawing, and calculating in connexion with such measurements. 3. A course of teaching planned so as to be suitable for the stage of advancement at which Students arrive in the third year of their collegiate attendance, and adapted to constitute an introduction to, or a scientific foundation for many of the chief subjects of study which are necessary or useful to the civil or mechanical engineer; to the architect, and to many other classes of artificers and practical men. Of these it may suffice to mention;—Strength and elasticity of materials and structures, bridges of various kinds, ornamental architecture, theory of hydraulics, and its application in practical water works, and subjects more

Appendix,
No. 7.
Digest
of Subjects
and
Courses.

particularly relating to mechanical engineering. The Students are engaged in practical work in the drawing class-room during their three entire sessions of attendance; most of them work very diligently there, and may attain to proficiency so as to be well prepared for doing good service in offices, and otherwise in engineering business at once on leaving College. Many of the engineering Students, too, in addition to carrying out their attendance on the lectures of the Professor of Chemistry, have been very assiduous in acquiring a knowledge of practical chemistry by working in the laboratory under his direction, where they learn the methods of analyzing ores and other minerals, and acquire practice in chemical manipulation.

DEPARTMENT OF ENGLISH LAW.

The Professor of English Law, in conducting his department, has constantly kept in view the object of the Select Committee of the House of Commons in recommending the foundation of Chairs in Law in connexion with the Queen's Colleges, which, as they stated in their Report on Legal Education, was not merely to prepare Candidates for the Bar, and for the profession of Attorney and Solicitor, but to raise the standard of legal attainments amongst local practitioners, and especially to provide opportunities of legal education to qualify persons intended to fill administrative situations not strictly legal—a policy which has been since followed up by the Legislature conferring privileges, by way of inducement, on Candidates for the profession of Attorney and Solicitor, who shall avail themselves of these Schools of Law.

The Lectures are made auxiliary to the contemporaneous studies directed, and are accompanied by interrogation, independent of the General Examination and that for Honours. Such books, cases, and decisions, and portions of treatises are pointed out for reading as are considered by the Professor most useful in elucidating a branch of learning which is scarcely furnished with books exclusively intended for instruction; and no efforts have been spared to point out the peculiarities of the law in Ireland, whether proceeding from statutes or inherent diversity of practice, or to direct attention to the recent changes which have been introduced into the course of procedure.

From the first opening of the College to the present time the successive classes have spontaneously applied themselves with assiduity and perseverance to the various subjects of legal instruction, and several Non-Matriculated Students have from time to time availed themselves of the privilege afforded by the College Ordinances of attending detached Courses of the Lectures on selected subjects.

Under these circumstances, I am gratified at being able to give the assurance that the Faculty of Law has fully realized the objects of its founders, and that a further extension of its public benefits would ensue upon the adoption by Government of the suggestion made by the same Committee of the House of Commons that a preference should be given to candidates for situations in the Civil Service, not of a purely legal nature, who could produce testimonials of legal attainments from those institutions—a rule which would fully accord with the principle laid down in a recent report of another Committee in relation to the Civil Service.

DEPARTMENT OF POLITICAL ECONOMY.

The Professor of Jurisprudence and Political Economy (Mr. T. E. Cliffe Leslie) fills in reality two distinct and important Chairs, in the two distinct Faculties of Law and Arts. As Professor of Jurisprudence, he lectures, teaches, and examines in the general philosophy and history of law, in Roman Law, and in Constitutional and International Law. As Professor of Political Economy, he lectures, teaches, and examines Arts Students in that great subject. His instruction in Jurisprudence has the twofold purpose and result of teaching legal philosophy and history, both as a branch of higher University Education, and as a preparation for the legal profession; and the duties of the Professor in this department, discharged as they are by Professor Leslie, would be sufficiently arduous if he had not also to fill the Chair of Political Economy, to which he devotes as much time and labour as though he had no other collegiate duties. The stipend and emoluments attached to this double Chair are altogether disproportionate to the abilities, attainments, and exertions it demands on the part of the Professor.

APPENDIX, No. 8.

AN ENLARGED DIGEST OF SUBJECTS AND COURSES pursued in Queen's College, Belfast.

Appendix,
No. 8.Digest
of Subjects
and
Courses.

GREEK—Professor, Charles MacDonall, LL.D., M.R.A.S.

In the Greek Class, as in all those which are attended during more than one session, the business, as well as the hours assigned to the Students of the different years, is necessarily different; but it is always distributed into three simultaneous processes, viz., public examinations, lectures more or less formal, and exercises written at home and commented on in the class.

In the first session, the complex and self-contained structure of the Greek language is subjected to a close analysis; carried out, on the one hand, by tracing words to their crude forms, by classifying terminations, both the primary and the flexional, and by discriminating among analogically correct forms those actually used in different ages and dialects; on the other hand, by exhibiting the methods by which words are combined in simple clauses, clauses are knit into sentences, and sentences compose periods less or more complicated. Some prose-work furnishes the materials for this analysis; while the Students read and translate it, or else re-translate off-hand passages read out in English before them by the Professor. Besides syntactical phenomena, the laws and characteristics of both epic and dramatic versification are expounded and exemplified, while a portion of the *Iliad* and some tragedy are used as text-books.

In the second session, while consecutive passages of Herodotus along with some Attic oration or philosophical treatise, and a portion of the *Odyssey* along with some Attic tragedy or comedy, form the basis of prelections, the previous discipline is continued and extended; the distinctions of dialect and style are more fully elucidated; the origin, growth, and fortunes of the epic, the drama, history, and other departments of literature, are more distinctly unfolded; discussions on points of mythology, geography, chronology, archaeology, æsthetics, &c., are more freely introduced and more amply treated. The Students are invited to turn Herodotean Greek, at sight, into Attic, altering both the forms of words and the structure of sentences; to re-translate passages into Greek prose and verse; and also to give in original essays in both forms of composition.

In a distinct or higher class, advanced Students, generally in the third or fourth year of their Course, are exercised in the study of more difficult works than those previously read, in the higher problems of criticism and philology, and especially in composing both prose and verse.

The following Text-books have been used in the successive Sessions of College from 1849-50 to 1875-6:—*The Iliad and the Odyssey* (both entire); Hesiodus, *Theogonia*; Pindarus, *Olympica*, *Pythia*, *Nemæa*; Aeschylus, all the Tragedies except the *Supplices*; Sophocles, the seven Tragedies; Euripides, all the Plays except the *Cyclops*; Aristophanes, *Nubes*, *Aves*, *Ranes*; Herodotus, portions of Books I., II., III., IV., VII., VIII., IX.; Thucydides, Books I., II., III., IV., VI., VII.; Xenophon, portions of *Anabasis*, *Memorabilia Socratis*, and *Cyropædia*; Platon, *Apologia Socratis*, *Gorgias*, *Phædon*, *Phædrus*, *Philebus*, *Protagoras*, *Theætetus*, *Timæus*, *Menon*, and Books I., II., VII., and X. of *Republica*; Aristoteles, *Poetica* and portions of *Rhetorica*; Demosthenes, *Philippicæ*, c. *Meidiam*, and *de Corona*; Aeschines, in *Ctesiphontem*.

The SANSKRIT and HINDUSTANI CLASSES, conducted during six Sessions by the Professor of Greek, have been discontinued.

LATIN—Professor, William Nesbitt, M.A.

The Professor of Latin gives three lectures weekly to Students of the First, and the same number to Students of the Second Year, attendance upon which is compulsory for all that take the Latin Classes. Besides these compulsory lectures, he gives two lectures additional to Students of each of these years, attendance on which is voluntary, in which more difficult authors are read, and special attention is paid to composition. The attendance on these lectures is very good. That on the general classes reaches, in the first two terms, a daily average of perhaps 90 per cent. of those enrolled: the voluntary classes are, usually, attended by about two-fifths of the Students of the First, and one-third of the Students of the Second Year.

An honor Class has been formed of Students of the Third and Fourth Years, chiefly attended by those who are anxious to distinguish themselves in Ancient Classics at the Degree Examination.

The Professor lectures thirteen hours each week throughout the Session, extending, with short intervals at Christmas and Easter, from the beginning of November to the beginning of June.

The proficiency of the Students depends, of course, to a considerable extent, upon their preparation at entrance. It has been the aim of the Professor, without fixing any fancy standard, to make the matriculation examination as strict as is consistent with the state of intermediate education in the province. Several important schools, he is happy to say, have been culled into existence by the influence of the Queen's College, and many more have been largely benefited, as well by its reflex action as by the large number of efficient teachers that it has supplied. Still this department of our educational system remains in a very unsatisfactory condition, and its organization—a work far beyond the reach of private enterprise—is confessedly the great desideratum of educational reform. At present, the practical requirement of this College in the Latin language from candidates for matriculation is that they should be able to read aloud a portion of a Latin author, in such a way as to retain the attention of the class; and this requirement is fairly met. Members of the class must, at each lecture, when called upon by the Professor—and all are called upon without any fixed order—translate into English a portion of the book which forms the subject of the term, and render into Latin an easy exercise.

In this way pass Students of the first year are expected, during the session, to get through some such course as this:—A book of *Livy*, Cicero, *De Legibus* and, if possible, selections from Juvenal; while those that attend the voluntary class read, in addition, say, a book of the *Georgics* of Virgil, together with selections from Terence and Cicero; and no Students are allowed to rise to the Second Year who fail to pass a satisfactory examination in at least the subjects of the pass course.

In the Second Year, pass men read with great care, under the same conditions as are observed in the First Year, some such course as this:—Three books of Cicero's Letters, and as many of Horace's Epistles as can be got through, continuing their efforts to attain, if not elegance, at least grammatical correctness in writing easy Latin; while the members of the Voluntary Class are expected, in addition, to read, say, five Satires of Juvenal, and part of the Satires and *Ars Poetica* of Horace, with selections from the *Agricola* of Tacitus.

At the end of the Second Year pass men have completed their Latin studies, and having passed the first examination in Arts at the University, are set free to pursue for their degree studies for which they have more special aptitude.

The Third Year's Latin Class is therefore strictly an Honor Class, and its members read as many of the authors prescribed for classical honors at the University as can be brought within the limits of the Session. Last year the books read were the *Pro Plancio* of Cicero, with selections from the *Annals* of Tacitus, and from Plautus.

During the whole Session, passages such as are set at Honor Examinations are rendered into Latin by the members of the Voluntary and Honor Classes, and their versions are carefully corrected by the Professor at home, and made the subject of comment in the class. Latin philology is studied with the aid of the excellent text books of Roby and Peile.

* I take as an example the actual course of the present year.

The Professor has made this *résumé* by the desire of the President, who thinks it due to the Legislature and the public that, at a time when so much laxity of statement is indulged in, an authentic account of the work of the College should be furnished by those to whose hands its teaching has been committed. If the Professor may be permitted to state his impression as to the results of that teaching, he would say that the attainments of the pass men—as might be expected from their punctual attendance upon lectures, and their very commendable diligence—are higher than those of the corresponding class in the University with which he is most intimately acquainted—the University of Dublin; while the attainments of honor men, who usually start from a much lower level, fall considerably short of those of the best men in that University. They may be represented by high distinction at such examinations as that for the Civil Service of India.

*Appendix,
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—
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of Subjects
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**HISTORY AND ENGLISH LITERATURE—Professor, Charles Duke Yonge,
A.M. OXON.**

Class of the English Language.

The business of this Class is conducted by—

A Course of Lectures on the Origin, Formation, Inflections, and Grammar of the English Language, for which Dr. Latham's "English Language" forms in some degree the text-book;

With occasional Lectures on the rules and principles of Prose Composition, and Weekly Essays.

Class of English Literature.

The business of this Class is conducted by—

A Course of Lectures on English Literature in general, and particularly on the lives, works, and styles of the best authors in each department;

With Special Lectures also on the works appointed as the subjects for the Dublin Autumnal Examination of the ensuing year, with and without Honors;

And Fortnightly Essays.

Class of History.

The business of this class is conducted by—

Lectures on History in general;

Lectures on English History, embracing rather the larger half of the entire course;

A subsequent course on the History or that portion of the History of any other country which is selected as a subject for the Dublin Autumnal Examination of the ensuing year.

MODERN LANGUAGES—Professor, Albert Ludwig Meissner, PH.D.

The instruction in Modern Continental Languages embraces three courses each for French and German, extending over three terms, and a course of Italian during the first two terms, attendance on which is voluntary.

No entrance examination is as yet held in Modern Languages, in consequence of which the insufficiency of intermediate teaching is more apparent in this department than perhaps in any other. The consequence of this is, that the Professor is over-burdened with a great amount of elementary teaching, without which his classes cannot be kept in good working order. The number of lectures delivered during the past session was no less than 406. Something, it is hoped, may be done to relieve the Professor of some part of the elementary teaching, so as to increase his usefulness in the more advanced classes.

Students in Arts and Medicine, and in the department of Engineering, are required to attend lectures on one Modern Language for one session. The majority select for this purpose the French language; several, however, attend both French and German. For Students in Arts of the second and higher years, Modern Languages form one in a group of four subjects, out of which they select two.

The work of the classes, especially during the first two terms, is carried on to a great extent by means of *visé* questions and answers. Frequent oral

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examinations are held, and at each meeting of the classes a passage is translated from English into French or German.

In the First Session the Grammar and the principles of composition are explained, and select passages are translated from French and German Classics.

In the Second Session a systematic course of composition is gone through, and the Students are made acquainted with the principal authors of French and German Literature.

In the Third Session a course on the elements of Comparative Grammar is delivered, which is followed by a course on some period of Continental Literary History. The students write essays in Modern Languages, which are read and discussed in the class.

Medical Students unable to attend the classes in Arts, are instructed in a separate class.

About six per cent. of the Students attending Lectures on Modern Languages are Non-Matriculated.

MATHEMATICS—*Professor, John Purser, M.A.*

Attendance on this Class is prescribed to all Students in the Faculty of Arts during the first year of their Course; during the second year Mathematics forms one of four Courses, out of which the Students select two.

All Students in the Department of Engineering are required to attend the Mathematical Classes during two years.

Before entering, Students are required to pass an examination in the First and Second Books of Euclid, and in a small portion of Algebra. Practically they come fairly prepared in the prescribed portions of Euclid, but a large proportion can hardly be said to possess even an elementary knowledge of Algebra. A considerable number of the Students are Candidates for Mathematical Scholarships at entrance, and these are generally well prepared in the first six Books of Euclid, and a considerable portion of Algebra and Plane Trigonometry.

On this account the instruction of the First Year in Mathematics has been given in two Divisions. The Lower Division is carefully taken through such portions of Euclid I., II., III., IV., VI., as they have not previously prepared, and is instructed in Algebra as far as the progressions, and in Plane Trigonometry as far as the solution of triangles, with the use of logarithms and trigonometrical tables. In the Upper Division a more advanced course of lectures is given in Geometry, Plane Trigonometry, and Algebra, to which is added either the Conic Sections, treated geometrically, or Spherical Trigonometry.

The Council has sanctioned the employment of the Senior Mathematical Scholar in giving a portion of the instruction of the Lower Division. This arrangement, while it affords a greater number of hours to the Lower Division enables the Professor of Mathematics to give more attention to the Upper Division, and has been found to work very satisfactorily.

In the Second Year the subjects of Lecture are Analytical Geometry, the Differential and Integral Calculus, and the first three sections of the Principia of Newton.

In the Third Year an Honor Course is given, in which are taught the higher branches of the Calculus, Geometry of Three Dimensions, and Differential Equations.

NATURAL PHILOSOPHY—*Professor, Joseph David Everett, M.A., D.Sc.*

The Classes in this Department are arranged under the three heads of Experimental Physics, Mathematical Physics, and Natural Philosophy Applied.

All Students in the Faculty of Arts in their Second Year attend the Classes of Experimental and Mathematical Physics. Engineering Students attend the Class of Experimental Physics in their First Year, the Class of Mathematical Physics in their Second Year, and the Class of Natural Philosophy Applied in their Third year. Medical Students attend the Class of Experimental Physics only.

In all these Classes the teaching is by prelection interspersed with oral examination.

The subjects treated under the head of Experimental Physics include—Properties of Matter, Mechanical Powers, the Elements of Hydrostatics and

Hydraulics, Heat, Light, Sound, Electricity, and Magnetism; the leading principles in these several departments being broadly laid down and copiously illustrated by experiments. Appendix
No. 3.

The Course of Mathematical Physics includes a rigorous demonstration of the principal theorems in Statics and Kinetics, an explanation of the leading principles of Astronomy, Geometrical Optics, and the Mathematical treatment of numerous questions connected with the subjects of the Experimental course. Digest
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In the Class of Natural Philosophy Applied, the subjects include a more advanced course of Statics, Kinetics, and Hydrostatics, involving application of the Differential and Integral Calculus, and illustrated by practical examples, Kinematics, including the principles of Mechanism, the relations of Stresses and Strains, Moduli of Elasticity and Rigidity, Work done, Kinetic and Potential Energy, Elements of Thermodynamics.

In addition to the above-named Classes, there is an Honor Class, attended by Senior Students, in which the subjects prescribed for University Honors are studied.

CHEMISTRY—*Professor, Thomas Andrews, M.D., LL.D., F.R.S., M.R.I.A.*

In the Class of Chemistry the greater part of the Course is devoted to pure Chemistry; but the Elements of the Sciences of Heat and Electricity, particularly in their relations with Chemistry Proper, are also taught. The application of these sciences to the arts are particularly referred to; and it has been the constant endeavour of the Professor to communicate to the Students as precise and accurate information as possible on the subjects treated in his Lectures, and to train them to habits of careful observation and accurate thinking. With this view a weekly examination of the whole Class is held, at which the Students are subjected to a searching examination on the business of the preceding week; and further to encourage a taste for scientific inquiry, and also to train a certain number of practical chemists, a limited number of the Students are admitted, by examination, as working pupils into the chemical laboratory, where they have an opportunity of acquiring a knowledge of chemical analysis. This latter arrangement has now been in practice for several years, and has been attended with the best results.

NATURAL HISTORY—*Professor, Robert O. Cunningham, M.D., F.L.S.*

1. The Zoological Department of the Course occupies the First Term and greater part of the Second, and comprehends an Outline of the Anatomy and Physiology, Classification, and Geographical distribution of animals.

2. The Botanical portion includes the Histology, Morphology, Physiology, Classification, and Geographical distribution of Plants. The Lectures are delivered during the months of May, June, and July; and in addition to them, there are weekly excursions and practical demonstrations.

The Lectures on Zoology and Botany are illustrated by numerous specimens and diagrams, and oral examinations are held once a week.

GEOLOGY, MINERALOGY, AND PHYSICAL GEOGRAPHY.—*Professor, Robert O. Cunningham, M.D., F.L.S.*

This Course includes Lectures on the Elements of the above branches of science. In the Mineralogical portion special attention is directed to those minerals which form important constituents of rocks, and those which possess the greatest economic value. The classification adopted is a chemical one.

The Geological Lectures are mainly devoted to an examination of the various strata composing the crust of the earth, and the organic remains contained in them.

The Lectures on Physical Geography include a survey of the principal phenomena of the sea, atmosphere, and land of the globe.

All three branches of the course are copiously illustrated by specimens and diagrams, and examinations are held once a fortnight.

Appendix,
No. 2.LOGIC AND METAPHYSICS—*Professor, John Park, M.A.*

LOGIC.

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This class meets at 2 P.M., on Tuesdays, Wednesdays, Thursdays, and Fridays, during the First, and part of the Second Terms of the Session.

The business of the class is conducted by lectures on Logic, or the science of the conditions on which depend valid inferences and the correct expression of evidence, containing under it Formal Logic (the theory of symbolical proof), and Material Logic; by examinations on the lectures and on Fowler's "Elements of Deductive Logic," and "Elements of Inductive Logic," and by the criticism of Essays on Logical subjects, of which four are required from each Student.

Students should read Morell's "Handbook of Logic," and Bacon's "Novum Organum," Book I, before entering the class.

METAPHYSICS.

This class meets at noon, on Tuesdays, Wednesdays, Thursdays, and Fridays, during the First and Second Terms of the Session.

The business of this class is conducted by lectures on Psychology, or the science which investigates the phenomena of the human mind and their conditions; and Metaphysics Proper, or the science which investigates the Nature of Truth and of Existence; by examinations on the lectures, on Mansel's "Metaphysics," and on Dr. Stirling's Translation of Schwegler's "Handbook of the History of Philosophy;" and by the criticism of Essays on Metaphysical subjects.

HIGHER LOGIC.

This class meets three times a week during the First and Second Terms of the Session, and is conducted by lectures, and a course of reading and examinations. Especial attention is paid to the subjects contained in the Degree Honor Courses of the ensuing year.

CIVIL ENGINEERING—*Professor, George Fuller, C.E.*

The Courses of lectures and practical instruction given by the Professor of Civil Engineering are arranged to accord with the Ordinances of the Queen's University, which prescribe to candidates for the Diploma in Civil Engineering a Curriculum extending over three Sessions usually, but admitting of abbreviation to two Sessions in the case of students whose previous acquaintance with a sufficient group of the subjects prescribed for study in the first and second Sessions of the ordinary Course shall be deemed by the College Council satisfactory.

For the First Year Students the Professor gives a course of instruction, comprising lectures and oral examinations on the Principles of Geometrical Drawing, and the performance by the students of practical work under his direction. The lectures include the principles of descriptive geometry, orthographic and isometric projection, and linear perspective; and the practical work comprises the performance of examples in these subjects, and the execution of drawings in Mechanical Engineering, and occasionally also in Architecture and Civil Engineering. The Class meets for two hours at a time on two days per week during the three Terms of the College Session.

For the Second Year Students two courses are conducted by the Professor of Engineering, of which one is a Lecture Course and the other a Practice Course. The Lecture Course comprises surveying, levelling, and plotting, with the theory and use of the instruments required in surveying and levelling operations; mensuration of earthworks for railways; setting out works on the ground, including ranging of railway curves, and setting out breadths of cuttings and embankments, and ranging tunnels, &c. The Course also comprises usually some of the following subjects:—revision and further prosecution of descriptive geometry, and perspective, and other subjects of geometrical drawing; designing and drawing of oblique bridges; properties and qualities of materials used in construction, and modes of procuring them; and an introduction to architecture as a fine art.

In the Practice Course of the Second Year the Students are engaged in the performance of office and field work, under the instruction and direction of the

Professor; and the business includes surveying, levelling, drawing, mapping, and the computation of areas of lands, and other engineering calculations. Excursions are also made occasionally during the Session to visit Engineering works.

For the Third Year Students there are (as for those of the Second Year), two Courses conducted by the Professor, one a Lecture Course, and the other a Practice Course. The Lecture Course comprises the further treatment of some of the subjects proposed to be entered on in the Second Year, and most of the following subjects:—foundations, cofferdams, bridges, tunnels, roads, and railways; specifications for engineering contracts; water-works for supplying towns; science of the flow of water in orifices, pipes, and canals; drainage of fens by gravitation, and by steam power and other mechanical means; regulation and improvement of rivers; science of the strength of materials and structures; ventilation of dwelling-houses, public buildings, and mines; processes and mechanisms used in foundries and engineering workshops.

The Practice Course includes office work, field work, and engineering excursions.

ANATOMY AND PHYSIOLOGY—*Professor, Peter Redfern, M.D. Lond., F.R.C.S.*

The Department of Anatomy and Physiology comprises two distinct Courses of Lectures—one on Anatomy and Physiology, the other on Descriptive and Surgical Anatomy, and also the teaching of Anatomy by Dissections throughout the day.

The Course of Anatomy and Physiology includes about 144 meetings, each of an hour's duration, held on the first five days of each week from November to April inclusive. These meetings are for lecture and occasional examinations on the subjects previously considered in the lectures. The lectures include a complete course of the Anatomy and Physiology of the general textures of the body, including the blood, chyle, &c., and a systematic account of the whole of the viscera, treated of as they are associated in groups for the several purposes of digestion, circulation, respiration, urination, innervation, and generation; also the organs of sense. In treating of every part or organ its healthy state is shown by recent dissections and by preparations from the Museum illustrating it in man and animals, its diseased states and actions being referred to at the same time and contrasted with the healthy ones. The textures not visible to the naked eye are shown under a series of achromatic microscopes, so that during the Course every student in the class has an opportunity of judging for himself of the true characters of each part, and, by becoming familiarized with these, of recognising each when changed by disease.

The Course of Practical Anatomy and Anatomical Demonstrations includes:—
1st. Dissections carried on throughout the day under the immediate superintendence of the Professor of Anatomy and Physiology, and the Demonstrator. Each Student is required to be steadily engaged in dissections during the whole Session. For this purpose the supply of subjects is regular and abundant, and thus affords the surest foundation for efficient medical teaching.

2nd. This Course includes the Anatomical Demonstrations, which consist of a complete Course of Descriptive and Surgical Anatomy, commencing with the anatomy of the skeleton and bones, and including the anatomy of the limbs and other parts, excluding that of the viscera and the physiology treated of in the Course of Anatomy and Physiology. The demonstrations are given on each of the first five days of the week, and are about 117 in number in each Session.

PRACTICE OF MEDICINE—*Professor, James Cuming, M.D.*

The class meets four times each week, from the first week of November to the last of the following April.

An examination is held usually once a fortnight. The Course embraces the principles of Inflammation, Fevers, the diseases, organic and functional, of the viscera of the three great cavities of the human body. In treating of individual diseases, their pathology, semeiology, ætiology, and treatment, are the subjects chiefly dwelt on. Wherever it is possible, pathology is illustrated by the preparations afforded by our Museum, by drawings and plates, or by recent specimens. It may be added that the Professor's present connexion with the Belfast General Hospital adds greatly to the means of making his Course more useful and interesting to students.

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No. 8.
—
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THEORY AND PRACTICE OF SURGERY—*Professor, Alexander Gordon, M.D.*

Four Lectures are delivered weekly during the Medical Session. An examination is held each day on the subject of the preceding day's Lecture. Each Course comprises the following subjects:—

Inflammation,
Suppuration,
Mortification,
Erysipelas,
Burns,
Ulcers,
Wounds,
Hæmorrhage,
Diseases of the Arteries,
" Veins,
Fractures of Trunk and Extremities,
" Cranium, Injuries of the
Brain and Scalp,
Dislocations,
Diseases of the Joints,

Diseases of the Bursæ,
" Bone, benign and malignant,
" the Jaws and Mouth,
" the Fingers and Toes,
" Female Breast,
" Anus and Rectum,
" Testis,
" Hereda,
" Prostate,
" Bladder,
" Eyes,
" Larynx,
Syphilis,
Gonorrhœa,
Stricture.

All the capital and minor operations are performed on the dead subject. The Professor delivers a separate Course of twenty-five Lectures on Operative Surgery.

MATERIA MEDICA—*Professor, James Seaton Reid, M.D.*

This Course includes—

- 1st. General Pharmacology, or the modes in which medicines act upon the living organism in a state of health.
 - 2nd. Therapeutics, or the modes in which medicines act as curative agents.
 - 3rd. Pharmacy.
 - 4th. Dietetics, a review of the different kinds of food used in health and in disease.
 - 5th. Special Pharmacology, or the history, composition, uses, and modes of administering medicinal agents for the cure of disease.
- The Class meets four times each week. An examination is held once every week.

MIDWIFERY—*Professor, Robert F. Dill, M.D.*

Lectures four times a week during the six winter months consist of following subjects:—

Anatomy of the pelvis, so much as is required for midwifery. Its measurement and pelvimeters.

Contents of the pelvis. The functions of the uterus in its virgin state.

Conception—length of gestation—changes of the uterus and its appendages during gestation.

Growth of child from its earliest seen form until its full parasitic size.

Graafian vesicle and corpus luteum. Fetus, its circulation, signs of maturity, weight, and length.

Plural births.

Proportion of births and deaths of males to females.

Superfœtation.

Signs of pregnancy.

Signs of approaching labour.

Natural labour, its progress; also the positions and progress of child till its separation from its mother.

Management of natural labour, including the arrangement of the bed and bed-room, and the proper dress and posture of the patient.

Tedious labour, its causes and treatment.

Labour requiring the use of instruments; their application taught on models in the class.

Cæsarean section and Sigaultean operation—how to prevent the fetus from getting large in uterus.

Premature labour—how to bring it on, and when it is necessary to do so.
 Cross-births and their treatment.
 Abortion—how to prevent it.
 Extra uterine gestations—how they occur, and their treatment.
 Management of women after delivery, and treatment of such accidents and diseases as occur at this period.

Management of children after birth, washing, dressing, food, &c., and the choice of a wet-nurse, and treatment of such accidents as take place at this period, or soon after.

Practical midwifery taught by pupils attending patients in their own houses and in the Lying-in hospital, where Clinical Lectures are given.

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MEDICAL JURISPRUDENCE—*Professor, John F. Hodges, M.D., F.R.C.*

The Lectures in this Course are delivered twice weekly during six months. They include an account of the history and chemical investigation of poisons, and of the various subjects respecting which the evidence and assistance of Medical Practitioners may be required in Courts of Law. Experimental illustrations of the methods to be pursued in medico-legal inquiries are given, and frequent examinations held to test the progress of Students. No salary has been allocated to the Teacher of this department, and the duties, at the request of the Council, have, since the opening of the College, been performed by Dr. Hodges.

ENGLISH LAW—*Professor, Edwin Molyneux, q.c.*

[1875-6—*Professor, John McKane, M.A.*]

The Course of the *First* year in this department comprehends the elements of real and personal property, with the principles of conveyancing; that of the *Second* consists of an introduction to the principles and practice of Courts of Equity and the law of Bankruptcy; the *Third* Course includes the common law as incident to contracts, the nature and form of remedies by civil action, and an outline of criminal law, theoretical and administrative, which last completes the Curriculum of instruction required for the attainment of the Diploma of Elementary Law in the Queen's University. The subjects prescribed for Students of the *Fourth* year to qualify them for the Degree of LL.B. embrace a more extended and detailed course of the subjects already enumerated, including the law of wills, powers, evidence, and procedure.

JURISPRUDENCE AND POLITICAL ECONOMY—*Professor, T. E. Cliffe Leslie, LL.B.*

The subjects embraced in the Course of Lectures on *Jurisprudence* are according to the regulations of this College, (1) the Elements of Jurisprudence, (2) Civil Law, (3) Constitutional Law, (4) Colonial and International Law.

In the treatment of these subjects both the *Historical* and *Philosophical* Methods are followed in the Lectures of the Professor. The Historical Method, for example, is applied in tracing the principal changes through which the laws of England have passed, the assignable causes of such changes, and the degree and manner in which, in comparison with the laws of Continental Europe, the laws of this kingdom have been affected by contact with the principles of Roman legislation. The method of Philosophical Analysis, on the other hand, is applied in investigating the doctrines of the foundation and classification of rights, the several parts and legitimate form of a complete code, the relation of Scientific Jurisprudence to other departments of Social Philosophy, and the means of improving the state of Positive Law as deducible from such considerations.

The subjects which a Course of Lectures on *Political Economy* must embrace are fewer and more definite than those classed under the less advanced and more complicated Science of Jurisprudence. It is the Professor's endeavour to illustrate the principles of Economic Science by the help of those practical applications which will be most interesting and useful in a large commercial town.

Appendix,
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Professor
Everett's
Memor-
andum.

APPENDIX No. 9.

MEMORANDUM respecting the arrangements for teaching NATURAL PHILOSOPHY elsewhere.

In the University of Glasgow there is an Assistant Lecturer in Natural Philosophy besides two experienced laboratory assistants. The laboratory consists of several large and well-equipped rooms, adjacent to the lecture-room, and a number of students are employed under the direction of the Professor and his assistants in original research.

In the University of Edinburgh there are two assistants to the Professor of Natural Philosophy, one of them a man of education and scientific training, the other an experienced laboratory assistant. There is a laboratory where original investigations are conducted by students under the direction of the Professor and his assistants.

In Owens' College there are two Professors of Natural Philosophy, one taking the Experimental and the other the Mathematical branch.

I have no knowledge respecting the assistants there, nor respecting the laboratory.

In King's College, London, there are two assistants to the Professor of Natural Philosophy; one of them is an educated man who delivers lectures besides assisting to superintend the students in the laboratory, the other is an experienced laboratory assistant. A large number of students are engaged in elementary practical work, especially in electrical work bearing on telegraphy.

In University College, London, the subject of Natural Philosophy is divided between the Professor of Experimental Physics and the Professor of Mixed Mathematics. The former has a very skilful practical mechanic to assist him in his teaching and to make apparatus.

(Signed),

J. D. EVERETT,

Professor of Natural Philosophy.

Appendix,
No. 10.

Report on
Lisburn
School.

APPENDIX No. 10.

[Some months ago I received an important and respectful application from the Ulster Provincial School, Lisburn, conducted under the auspices of the Society of Friends, requesting such a recognition by the Council of this College as is given by the Syndicates of Oxford and Cambridge Universities to similar schools in England. This application I will take an early opportunity of bringing under the notice of the Council, in order to ascertain what general action might be adopted by this College in reference to the recognition and examination of similar establishments in the province. In the mean time, at the request of the Committee of the Lisburn School, I appointed Mr. M'Mullan, M.A., to examine the various departments of the school, and to furnish me with a report, to be brought under the notice of the Council. He has presented me with the following report.—P. S. H.]

REPORT.

Queen's College, Belfast,
16th March, 1876.

SIR,—In accordance with instructions received from you, I examined, during three days towards the end of February, the classes in the Friends'

Provincial School, Lishurn; and I now beg leave to report very briefly on the general condition and arrangements of the school as an educational institution, and on the proficiency of the pupils in their several courses of study.

*Appendix
No. 16.
Report on
Lishurn
School.*

The Provincial School was founded in 1774 for the board and education of the children (boys and girls) of members of the Society of Friends. The number in attendance at present is 61 (22 girls) against 25 in the year 1858. I find that the school buildings are barely adequate for the accommodation of the pupils and the teaching staff. The girls and boys pursue for the greater part the same courses of study, and in the same classes; and this arrangement has been found to work well.

The school was originally intended to be what is called a "Commercial School," but I am glad to say that the courses studied at present are much more numerous and more extended than that title promises. All the boys and a few of the girls learn Latin; 25 pupils (9 girls) study Physical Science; 33 in a school of 61 learn French; and all are taught Drawing. The boys leave school and enter on commercial life far too soon: the average age of the pupils in the highest class is something under 14.

As respects the examination—everything which comes under the general head "English education" is satisfactory; and some things are more than satisfactory. In Arithmetic the pupils display extraordinary proficiency—particularly the first class. In the more advanced group of subjects (Latin, French, Geometry, Algebra) the elementary stage has not yet been passed, but the knowledge acquired is sound, and will serve as a good foundation. The Drawing is extremely good.

Though two, or perhaps three, of the best girls are better than any two or three of the boys, the girls as a whole are not equal to the boys as a whole. It ought to be added that the girls have to devote much of their time to learning practical housekeeping, which forms a regular part of their school duties.

I recommend (1) that English Grammar be taught more as a science, though not less as an art; (2) that History be not so much confined (as, indeed, it is almost everywhere) to genealogies and the names and dates of kings; and (3) that Greek and Chemistry—two subjects of great educational value—be added to the school curriculum.

Steps are being taken to carry out these recommendations.*

I cannot speak in too high terms of the ability, energy, and conscientiousness of the Management—of the order and discipline which reign in the school. The pupils appear to regard their teachers with respect and affection; and—an important point—the teachers appear to merit their respect and affection. I only regret that the great educational advantages which this school affords are not within the reach of a larger circle of boys and girls of the middle class.

I have the honour to be, sir,

Your obedient servant,

S. J. M'MULLAN.

To the Rev. the President,
Queen's College, Belfast.

* Since the above report was written, the study of Greek has been introduced, and other improvements are (March 31) in progress.

Appendix,
No. 11.

Matriculation Ex-
amination.

APPENDIX No. 11.

MATRICULATION EXAMINATION, OCTOBER, 1874.

ENGLISH LANGUAGE AND LITERATURE.—*Examiner, Professor Yonge.*

1. From what language or languages is the English language derived? State under what circumstances each of those other languages was introduced into Britain?

2. Give a list of the Sovereigns who reigned from 1066 to 1510: explaining the relationship in which each stood to his predecessor.

3. What events are chiefly remarkable in the career of Waltheof; Lanfranc; Strongbow; Langton; Hubert de Burgh; Simon, Earl of Leicester; Warenne, Earl of Surrey; Hugh le Despenser; the Earl of Warwick; Lord Stanley? (Five out of the ten may be selected.)

4. What were the chief provisions of the Constitutions of Clarendon?

SUBJECT FOR ESSAY.

The Norman Conquest; or, the advantage, to persons of every class, of a taste for literature.

MATHEMATICS.—*Examiner, Professor Purser.*

ARITHMETIC.

1. If 3 men can mow 20 acres in 7 days, what fraction of an acre does 1 man mow in 1 day.

2. Find the value of 29 yards 2 feet 7 inches, at 4s. 4d. per yard.

3. Explain the meaning of discount. Find the discount on a bill for £235 due in 4 months, at 6 per cent.

4. Express $\frac{7}{8}$, $\frac{1}{4}$ and $\frac{1}{5}$ as fractions having all the same denominator.

Calculate $\frac{\sqrt{a}-4}{\frac{1}{2}-\frac{1}{3}}$.

5. Reduce three half-pence to a decimal fraction of a pound. Multiply .023 by .02, and prove the result by vulgar fractions.

6. The area of a circle divided by that of the square described on its diameter = .7854 approximately. Find the diameter of a circle, which shall contain an acre (an acre contains 4840 square yards).

EUCLID.

1. Bisect a given right line.

2. Triangles upon the same base and between the same parallels are equal.

3. If a right line be divided equally and unequally, the sum of the squares on the unequal segments is equal to twice the square on half the line together with twice the square on the intermediate segment.

ALGEBRA.

1. Multiply $x^2 + x - 6$ by $x^2 + x - 2$, and divide the result by $x^2 - 4$.

2. Resolve into factors each of the expressions $x^2 - x$ and $x^2 - 1$. Find their least common multiple.

3. Solve the equations

$$1^{\circ} \quad 5(x - \frac{1}{2}) = 7(x - \frac{3}{2}).$$

$$2^{\circ} \quad \frac{5}{x+1} - \frac{2}{x} = \frac{3}{x+2}.$$

$$3^{\circ} \quad \sqrt{x+12} = \sqrt{x} + 2.$$

Appendix,
No. 11Matricula-
tion Ex-
amination.

PEEL PRIZE EXAMINATION.

Peel Prize
Examina-
tion.GEOMETRY.—*Examiner, Professor Purser.*

1. Describe a rectilinear figure equal to one given rectilinear figure and similar to another.

2. One vertex of a triangle of given species is fixed, a second moves along the circumference of a given circle; find the locus of the third.

3. A, B are two fixed points on a given circle, P a variable point on the same circle. A tangent is drawn to the circle at the given point T and AP, BP are produced to meet the tangent in X and Y ; show that the rectangle $TX.TY$ varies as XY .4. From O one of the points of intersection of two given circles, a variable line is drawn meeting the circles again in P and Q ; prove that the rectangle $OP.PQ$ varies as the perpendicular let fall from P on the common chord.

5. Find a point such that the sum of its distances from the three vertices of a given triangle shall be the least possible.

6. Find the locus of a point such that if perpendiculars be let fall from it upon the sides of a given triangle, the triangle formed by joining their feet shall have a constant area.

7. Through a given point O two variable lines are drawn meeting a given circle in PP', QQ' respectively. Show that, if the chord PQ passes constantly through a fixed point, the chord $P'Q'$ passes through another fixed point.

8. Draw a circle to touch three given circles.

9. Find the locus of the centre of a circle cutting two given lines at two given angles.

10. Determine the point subtending two given lines AB and CD in similar triangles.

SCHOLARSHIP EXAMINATION, OCTOBER, 1874.

Scholarship
Examina-
tion.

LITERARY SCHOLARSHIPS.—FIRST YEAR STUDENTS.

GREEK.—*Examiner, Professor MacDonall.*I.—Translate these lines from the VIth Book of the *Iliad* :—

τὴν δ' ἡμίβητ' Ἰφίτα μέγας κοροβαίολος ἔκρωρ
 "μή μοι δίνῃς ἄνιπ μελίσσεν, ἴππωνα δ' ἄνιπ
 μή μ' ἀπογνώσῃς, ἴππωνα δ' ἄνιπ τε λάθωμαι.
 χερσὶ δ' ἀνέκτισσιν φίλ λαβέμεναι εἴθετα δύνῃ
 ἄλονται· εὐδὲ περ ἔστι κελαινὰ κ' ἔρπονται
 αἶματι καὶ λείβωσι πεπταλαγμένον· εὐχόμεσθα."

Appendix,
No. 11.Scholarship
Examina-
tion.

ἀλλὰ σὺ μὲν πρὸς νηὸν Ἀθηναίης ἀγέλειπες²
 ἔρχου, ἔγω δὲ Πάριον μετελεύσομαι ὅθρα ἐπλήσω,³
 αἱ κ' ἐθέλῃς εἰπόντος ἀκούειν. ὥς δὲ αἰ αὖθις⁴
 γαῖα χέουσι⁵ μέγα γὰρ μιν Ὀλύμπιος ἔτρεψε πῆμα⁶
 Τρωσὶ τε καὶ Πριάμῳ μεγαλήτορι τοῖό τε πασίην,
 εἰ κενὸν γὰρ ἴδοιμι κατελθόντ' Ἀϊδὸς εἴσω,
 φασίην κεν φίλον ἦτορ εἰζὼς ἐκλελασθῆσθαι.¹
 ὥς ἔραθ' ἡ δὲ μολοῦσα ποτὶ μέγαρ' ἀμφιπέλοισιν
 εἰκλετο² ταῖ' ὅ' ἄρ' ἀώλλισσας³ κατὰ δασυν γυραίῳ.
 αὐτὴ δ' ἔς τιν θάλαμον κατεβήσεται κηώντα,⁴
 ἐνθ' ἦσαν πύκλοι, παμπόεδα ἔργα γυναικῶν
 Σιδονίων, τὰς⁵ αὐτὸς Ἀλῆξανδρος θεοειδὴς
 ἤγαγε Σιδονίην, ἐπιπλῶς⁶ εὐρία πόντον,
 τὴν δὲδὼν ἦν⁷ Ἐλάνην περ ἀνήγαγον εὐπατέρειαν.⁸
 τῶν τὸν ἀειραμένην Ἐκάβῃ φέρε ἴδων Ἀθήνῃ,
 ὅς κ' ἄλλιστος ἔην⁹ ποικίλμασιν ἠδὲ μέγιστος,
 αὐτὴ δ' ὥς ἀπὸ λαμπρῶν, ἔκλυτο δὲ νύκτας¹ ἄλλων.
 βῆ δ' ἴσται, πολλοὶ δὲ μετεσεύοντο γυραιαί.
 αἱ δ' ὅτε νηὸν ἴσανον Ἀθήνης ἐν πύλῃ ἀκρῇ,
 τῆσι θύρας ὤξε² Θεανὴ καλλιπάρους³
 τὴν γὰρ Τρώας ἴθρην Ἀθηναίης ἱερειαν.
 αἱ δ' ἀλοαγγὴ πᾶσαι Ἀθήνῃ χεῖρας ἀνίσχου.
 ἡ δ' ἄρα πύκλον ἐλοῦσα Θεανὴ καλλιπάρους
 θῆκεν Ἀθηναίης ἐπὶ γούνασιν ἠνεμόω,
 εἰςχεμένη δ' ἠρώτο Διὸς κόρυν μεγάλην.⁴
 "πότνι' Ἀθηναίη, βυσίπτολα,⁵ Δία θεῶν!⁶
 δῆλον δὴ ἔγχεος Διομήδεος ἦδὲ καὶ αὐτῶν
 πρηνῆ δὲς πύκλῳ Σκαῖῳ προπάροθι πυλῶν,
 ὅθρα τοι αὐτίκα νῦν δουκαῖδεα βοῆς ἐπὶ νηφ⁷
 ἦνις⁸ ἦεῖστας⁹ ἱερύτομεν,¹⁰ αἱ κ' ἐλπίσιν
 δασυ τε καὶ Τρώων ἀλέχουσι¹¹ καὶ νύκτιας¹² τέλει."
 ὥς ἔφατ' εἰςχεμένη· ἀνένευε δὲ Παλλὰς Ἀθήνη.

II.—1. Parse accurately and fully the words to which the figure 1 is attached, briefly elucidating any forms which may appear noteworthy.

2. Derive or decompound the words to which the figure 2 is attached, elucidating peculiarities of structure which any of them may present.

3. State very briefly the laws of syntax exemplified in the case or the mode of the words to which the figure 3 is attached.

Translate the following unprepared passage:—

χιλιῶν ἐκκλησίαν τῶν ὁρνέων συναθροίσασα παρῆναι φάσκουσα κρᾶτιστον εἶναι τὸ μὴ προσκῆπτων ἀνθρώποις ἀλλὰ φύλιαν συνθεμένους οἰκίους διακίεσθαι πρὸς αὐτοὺς. τῶν δὲ ὁρνέων τις τὰ ἐναετία τῇ χιλιῶν εἰλεγεν· "ἀλλὰ τὸ σπέρμα τοῦ λίνου μέλλον κατασθίοντες ἀναλίσκωμεν καὶ ἀφανίς ποιῶμεν, ἵνα μηδεὶς ἔχῃσι πλῆκεν δίκτυα καθ' ἡμῶν." ἡ μὲν οὖν χιλιῶν, ἀρίστην γνώμην ἔχουσα, αἰνούνους ἐν ταῖς πόλεσι διατρέβουσα καὶ ἐν ταῖς οἰκίαις τίετοῦσα παρ' ἀνθρώποις οὐδὲν ὅπ' αὐτῶν πάσχει κακόν, τὰ δὲ λοιπὰ ἔθνη, οἷς διεγνώσθη μέλλον κατασθίειν τὸ σπέρμα ὥς πάντων κακῶν αἴτιον, δικαίως ὅπ' ἀνθρώπων συλλαμβανόμενα λαπαυνῶνται, οἷα τε ταύτην τὴν κακογνώμοσίνην ἐπομένοντα μετενόησε μὴ μετ' ἀνθρώπων μένειν ἀλλ' ἐν αἵρῃ πέτεσθαι ὡσαύτως δὲ καὶ τῶν ἀνθρώπων, ὅσοι ἐν τοῖς πράγμασι τῇ τῆς ἀγχινοίας βουλευμάτων χρῶνται, τοῖς δὲ ὥς ἐπὶ πλείστον συμβαίνειν αἰνούνους διαφυλαχθῆναι.

Translate these sentences into Attic :—

"I think that even this man, should anyone ask him what is it that he would have done if placed in the same circumstances with my friend, would have made this reply and no other :—'that he would have adopted one who would both honour him while living and bury him when dead.'"

Cleandros hearing this said, that he was not disposed to commend Dexippos if he had so acted : he however expressed his opinion that that person ought not, even if utterly bad, to suffer violence, but to be tried and receive the sentence due. He added :—For the present therefore leave this man with me and depart, and, when I give notice, be present at the trial."

"I maintain also that any other person whom he may accuse ought to surrender himself for trial : for thus ye would be absolved from the charge. But, as matters stand now, it will be hard if we, while expecting to meet with applause and honour in Hellas, shall—instead of that—not even be in the same condition with all others but be excluded from the Hellenic cities."

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No. 11.

Scholarship
Examina-
tions.

LATIN.—*Examiner, Professor Nesbitt.*

Translate :

1. Fuis Auruncis victor tot intra paucos dies hellis Romanus promissa consulis fidemque senatus expectabat, cum Appius, et insita superbia animo, et ut collega vanam faceret fidem, quam asperrime poterat ius de creditis pecuniis dicere. deinceps et qui ante nexi fuerant creditoribus tradebantur, et necabantur alii. quod ubi cui militi incideret, collegam appellabat. concursus ad Servilium fiebat ; illius promissa iactabant, illi exprobrabant sua quisque belli merita cicatricesque acceptas. postulabant, ut aut referret ad senatum, aut ut auxilio esset consul civibus suis, imperator militibus. movebant consulem haec ; sed tergiversari res cogebat : adeo in alteram causam non collega solum praeceps erat, sed omnis factio nobilium. ita medium se gerendo nec plebis vitavit odium, nec apud patres gratiam iniit. patres mollem consulem et ambitiosum rati, plebes fallacem ; brevique apparuit adaequasse eum Appii odium. certamen consulibus inciderat, uter dedicaret Mercurii sedem. senatus a se rem ad populum reiecit : utri eorum dedicatio iussu populi data esset, eum praecesse annonae, mercatorum collegium instituere, sollemnia pro pontifice iussit suscipere. populus dedicationem aedis dat M. Lactorio primi pili centurioni : quod facile appareret non tam ad honorem eius, cui curatio altior fastigio suo data esset, factum quam ad consulum ignominiam.

Explain accurately the position of the *nexus*. What is the meaning of *appellatio* ? Why were these functions assigned to the dedicator of the Temple of *Mercurius* ? Who at this time constituted the *populus* to whom the decision was referred ?

2. Translate and comment on the words printed in italics :

(a) Adeo id gratum plebi fuit, ut . . id modo sciscerent juberentque, ut senatus decerneret qui Romae regnaret.

(b) Et Ancum Sabina matre ortum nobilemque una imagine Numae esse.

(c) Ut concilia populi, exercitus vocati, summa rerum, ubi aves non admisissent, dirimerentur.

(d) Miscuit manipulos ex Latinis Romanisque, ut ex binis singulos faceret binosque ex singulis ; ita geminatis manipulis centuriones imposuit.

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tions.

(c) Neque suum cuique jus modum faciebat, sed virium spes, et manu obtinendum erat quod intenderes.

(f) Ut familia ad aedem Cereris venum iret.

(g) Igitur tribuni, ut impediendae rei nulla spes erat, de proferendo exercitu agere.

(h) Nisi ita esset, multi privatim ferebant Volscio iudicem.

(i) Quemcumque licet iussu consulis prehendisset, tribunus mitti iubebat.

(k) Populum iurciurando adegit neminem Romae passuros regnare.

Unprepared Latin.

3. In surditate vero quidnam est mali? Erat surdaster M. Crassus: sed aliud molestius, quod male audiebat; etiam si, ut mihi videbatur, iniuria. Nostri Graece fere nesciunt, nec Graeci Latine. Ergo hi in illorum, et illi in horum sermone surdi: omnesque nos in iis linguis, quas non intelligimus, quas sunt innumerabiles, surdi profecto sumus. At vocem citharoedi non audiunt: ne stridorem quidem serrae tum, cum acuitur: aut grannitum, cum iugulatur, suis: nec, cum quiescere volunt, fremitum murmurantis maris. Et, si cantus eos forte delectant, primum cogitare debent, antequam hi sint inventi, multos beato vixisse sapientes: deinde multo maiorem percipi posse legendis his, quam audiendis, voluptatem: tum, ut paullo ante caecos ad aurium traducebamus voluptatem, sic licet surdos ad oculorum. Etiam qui secum loqui poterit, sermonem alterius non requiret.

Congerantur in unum omnia, ut idem oculis et auribus captus sit; prematur etiam doloribus acerrimis corpora. Qui primum per se ipsi plerumque conficiunt hominem: sin forte longinquitate producti vehementius tamen torquent, quam ut causa sit, cur ferantur: quid est tandem, dii boni! quod laboremus? Portus enim praesto est mors, aeternum nihil sentiendi receptaculum.

4. Explain the following constructions in the above extracts:

- (a) Cum Appian . . . jus dicere.
- (b) Ut auxilio esset civibus.
- (c) Quod facile appareret, etc.
- (d) Antequam hi sint inventi.

5. Explain accurately the usage of *postquam* and *antequam*; also of *quancumque* and *quancumque*.

6. Derive and explain the following:—*Consul*, *pecunia*, *praecox*, *ambitiosus*, *plebs*, *tergiversor*, *annona*, *surdaster*, *murmur*, *grannito*, *bini*.

7. Translate into Latin prose:

With this view he fortified his own camp with great care, occupied all the posts of strength round the place, and having entirely cut off the besieged from any communication with the adjacent country, he waited patiently till necessity should compel them to open their gates. But their enthusiastic zeal for liberty made the citizens despise the distresses occasioned by the scarcity of provisions, and supported them under all the miseries of famine. Mouluc, by his example and exhortations, taught his soldiers to vie with them in patience and abstinence; and it was not until they had withstood a siege of ten months, until they had eaten up the horses, dogs, and other animals in the place, and were reduced almost to their last morsel of bread, that they proposed a capitulation. Even then they demanded honourable terms; and as Cosmo, though

no stranger to the extremity of their condition, was afraid that despair might prompt them to enter upon some wild enterprise, he immediately granted them conditions more favourable than they could have expected.

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tions.

Translate, with brief notes when you think it necessary :

- Ast ubi digressum Siculae te admoverit orae
Ventus, et angusti rarescent claustra Pelori ;
Laeva tibi tellus et longo laeva petantur
Aequora circum, dextrum fuge litus et undas.
Haec loca vi quondam et vasta convulsa ruina—
Tantum aevi longinqua valet mutare vetustas—
Dissiluisse ferunt : quum protenus utraque tellus
Una foret ; venit medio vi pontus, et undis
Hesperium Siculo latas abscedit, arvaeque et urbes
Littore diductas angusto interluit aestu.
Dextrum Scylla latas, laevum implacata Charybdia.
Obsidet, atque imo barathri ter gurgite vastos
Sorbet in abruptum fluctus, rursusque sub auras
Erigit alternos et sidera verberat unda.
At Scyllam caecis cōhibet spelunca latebris,
Ora exsertantem et naves in saxa trahentem.
Prima hominis facies et pulchro pectore virgo
Pube tenus ; postrema inhumani corpore pistrinx,
Delphinum caudas utero commissa luporum.
- Quis te, magne Cato, tacitum, aut te, Cosse, relinquit ?
Quis Gracchi genus, aut geminos, duo fulmina belli,
Scipiadas, cladem Libyae, parvoque potentem
Fabricium, vel te sulco, Serrane, serentem ?
Quo fessum rapitis, Fabii ? Tu Maximus ille es,
Unus qui nobis cunctando restituis rem.
Excudent alii spirantia mollius aera,
Credo equidem, vivos ducent de marmore vultus,
Orabunt causas melius, caelique meatus
Describent radio et surgentia sidera dicent ;
Tu regere imperio populos, Romane, memento :
Hae tibi erunt artes, pacisque imponere morem,
Parcere subiectis, et debellare superbos.
- Vino et lucernis Medus scinaces
Immane quantum discrepat : impium
Lenite clamorem, sodales,
Et cubito remanete presso !

Vultis severi me quoque sumere
Partem Falerni ? Dicat Opuntiae
Frater Megillae, quo bestus
Vulnere, qua pereat sagitta.—

Cessat voluntas ?—Non alia bibam
Mercede. Quae te cunque domat Venus,
Non erubescendis adurit
Ignibus ingenuoque semper

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Examination.

Amore peccas. Quidquid habes, ago,
Depono tutis auribus.—Ah miser,
Quanta laborabas Charybdi,
Digne puer meliore flamma!

Quae saga, quis te solvere Thessalis
Magus venenis, quis poterit deus?
Vix illigatum te triforini
Pegaeus expediet Chimaera.

4. Impioe parvae recinentis omen
Ducat et praegnans canis, aut ab agro
Rava decurrens lupa Lanuvino
Fetaque volpes;

Rumpat et serpens iter institutum,
Si per obliquum similis sagittae.
Terruit mannos: ego cui timebo,
Providus auspex,

Antequam stantes repetat paludes
Imbrium divina avis imminensum,
Oscinem corvum prece suscitabo
Solis ab orta.

Sis licet felix, ubicunque mavis,
Et memor nostri, Galatæ, vivas,
Teque nec laevus vetet ire picus
Nec vaga cornix.

Sed vides, quanto trepidet tumultu
Pronus Orion. Ego quid sit ator.
Hadriae novi sinus et quid albus.
Peccet Iapyx.

Discuss the variations in the text of the last passage which have been accepted by some modern editors.

5. Translate and comment on the words printed in italics:

- (a) *Triginta magnos volvendis mensibus orbis
Imperio explebit.*
- (b) *Nunc terras ordine longo
Aut capere aut captas iam despectare videntur.*
- (c) *Et si fata deum, si mens non laeva fuisset,
Impulerat ferro Argolicas foedare latebras.*
- (d) *Sed quis erit modus, aut quo certamine tanto?*
- (e) *Spatia et si plura supersint,
Transeat elapsus prior, ambiguumque relinquat.*
- (f) *Et ademptus Hector
Tradidit fessis leviora tolli
Pergama Graia.*
- (g) *Quid quisque vitet nunquam homini satis
Cautum est in Aeras: navita Bosporum
Poenus perhorrescit neque ultra
Caeca timet aliunde fata.*

- (h) Quin et Prometheus et Pelopis parens
Dulci laborem decipitur sono.
(i) Non incendia Karthaginis impiae
Eius, qui domita nomen ab Africa
Lucratus rediit, clarius indicant
Laudes quam Calabrar Pierides.

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tions.

6. State the structures of the Sapphic and the Alcaic Stanzas, and mention any irregularities in them admitted by Horace.

7. Turn into Latin verse :

Yet can I not persuade me thou art dead,
Or that thy corse corrupts in earth's dark womb,
Or that thy beauties lie in wormy bed,
Hid from the world in a low-delved tomb.
Could Heaven for pity thee so strictly doom?
Oh no ! for something in thy face did shine
Above mortality, that shewed thou wast divine.

HISTORY.—*Examiner, Professor Yonge, M.A., Oxon.*

1. Harold had been king of England only. Mention the circumstances which led to subsequent kings of England extending their dominions, in both these islands and on the continent ; and explain also the circumstances under which some of them lost territories which their predecessors had acquired.

2. What kings of France were contemporaries of Henry II., John, Henry III., Edward I., Edward III., and Edward IV.

3. Enumerate and explain the character of the most important provisions of Magna Charta : and point out the influence which they had on the subsequent growth of the English Constitution.

4. Give some account of Archbishop Langton, Hubert de Burgh, Cressingham, Sir Walter Manny, Peter de la Mare, the Duke of Bedford, the Duke of Suffolk, Dudley.

Write a brief Essay on the English Parliament, mentioning especially any similar body or bodies which had previously existed in the kingdom ; the circumstances under which it was founded (as is commonly said) in the reign of Henry III. ; its subsequent development and extension of power and authority under his successors.

SECOND YEAR STUDENTS.

GREEK.—*Examiner, Professor MacDowall.*

Translate the following stanzas from the *Bacchae* of EURIPIDES, and annex brief notes on idioms, metres, and mythologic and geographic references.

Ὀσία, πόρνα θεῶν,
Θῆμι! τάδ' εἰ καὶ γὰρ
πρὸς χροῶν οὐ φίλα,
τάδε Περσέως δῖος;

σρ. α'.

D

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tions.

ὅπως οὐχ ὀΐαν
ἵβριν εἰς τὸν Βρόμον,
τὸν Σαρίλας, τὸν παρὰ καλλιτεχνάων;
εὐφροσύνας δαίμονα πρῶτον μακάρον; ὅς τὰδ' ἔχει,
θεοσύνει τε χοροῖς μετὰ τ' εὐλοῦ γελᾶσαι
ἀποπαθεῖν τε μερίμνας, ἀτόταν βέτρυνος ἰλθῆ γένος ἐν δαιτὶ θιάω
μισοφρόνας τ' ἐν θαλάσῃ ἀνδράσι κρατὴρ ὕπνου ἀμφιβέλλει.

ἰοίραν· περὶ Κύπρον, νῆσους τᾶς Ἀφροδίτας,
ἐν ᾗ θελξίμοις νύκονται θνατοῖσιν Ἑρωτες,
χθόνα δ' ἂν ἐκαστοστομοὶ βαρβάρου παταμοῦ βοᾷ
καρπίζουσι ἀνομβρον! ποῦ δ' ἂ καλλιτεχνούμενα
Πιστρία μεφύσας ἔβρα, σίμνᾳ κλειτὸς Ὀδύμπου;
ἑκείν' ἀγε μ', ὦ Βρόμα,
πρόβλαχ' εἴνε δαίμον!
ἑκεί δὲ βόσκωνος θέμης ὀργιάζων.
ὁ δαίμων δ' αἰὲς παῖς χαίρει μὲν θαλίᾳσιν
φολᾷ δ' ἐλβεδόττησαν Εἰρήσαν κυροσφόνον θάδν.
ἐπ' ἱσθῆς δὲ τὸν Ὀλβιον τὸν τε χάριον δὲδ' ἔχειν
αἶνον τίρβην ὀλοποῦ· μισθὸν δ' ᾗ μὴ ταῦτα μέλει,
κατὰ φάος νόστος τε φίλος εὐαίωνα διαζῆν
σοφάν τ' ἀπύχην πραπίδα
πικροσύν ἀπὸ φωτῶν.
τὸ πλῆθος δ' ἐν τὸ φαυλόττηρον
ἐνέμωσι χρῆται τε, τὸδ' ἂν δεχοίραν.

στρ. β.

ἀντ. β.

Translate the following (unprepared) passage, being an ironical description of abstracted students:—

οἱ τοὶ δὲ πονεῖν ἐν νύκτι πρῶτον μὲν εἰς ἀγρόν· οὐκ ἴσασιν τὴν δόξιν οὐδὲ ὕπνον διακοπῆμεν
ἢ βουλευτήριον ἢ τι κοινὸν ἄλλο τῆς πόλεως συνίδρουν, νόμους δὲ καὶ φημίματα
λεγόμενα ἢ γεγραμμένα οὕτω ἄρῃσιν οὕτω ἀκούουσι. στουδαὶ δὲ ἱταμῖδον ἐπ' ἄρχῃς καὶ
σύνεσι καὶ λείπνῃ καὶ σὺν αὐλητρίᾳ αἶμοι—οὐδὲ ἄνω πρᾶτταν προσίσταται αὐτοῖς,
οὐδὲ δὲ ἡ κοινὴ τίς γέγονεν ἐν πόλει ἢ τίνων ἐκ πραγμάτων ἢ ἀνδρῶν ἢ γυναικῶν, μᾶλλον
αὐτὴν λήθην ἢ οἱ τῆς θαλόττης λεγόμενοι χίος. καὶ ταῦτα πάντα οὐδ' ὅτι οὐκ αἶδον,
αἶδον. οὐδὲ γὰρ αὐτῶν ἀπύχεται τοῦ εὐδοκίμου χέρον· ἀλλὰ τῷ ὅτι τὸ σῶμα μένει ἐν
τῇ πόλει κείνῃ αὐτοῦ καὶ ἐπιδόμει, ἢ δὲ δίδωσι, ταῦτα πάντα ἡγεταμένη σμικρα καὶ
ἀτιμώσασιν, πανταχῇ φέρεται κατὰ Πίνδαρον, τὰ τε γὰρ ὑπὲρθε καὶ τὰ ἐπὶθεῖς
γεμντροῦσα οὐρανοῦ τε ὑπὲρ ἀστρωναμῶσα, καὶ πᾶσαν πόλιν φέρον ἱρυνωμένη τῶν
ἄντων ἱερατοῦ, εἰς δὲ τῶν ἑγγύς οὐδὲν αὐτὴν εὐκαθεῖσα.

LATIN.—*Examiner, Professor Nesbitt.*

Translate:—

1. Equitum levique armorum statio, composita instructaque in
subitos tumultus, et suo militi tuta omnia et infecta effusis hostium
popularioribus praebebat; neque univereo periculo summa eorum com-
mittebatur, et parva momenta levium certaminum ex tato coeptorum
finitimo receptu adsuafaciebant territorium pristinis cladibus militem minus
iam tandem aut virtutis aut fortunae paenitere enae. sed non Han-
nibalem magis infestam tam sanis consiliis habebat quam magistrum
equitum, qui nihil aliud quam quod impar erat imperio morae ad rem
publicam praecipitandam habebat, ferox rapidusque in consiliis ac lingua
immodicus. primo inter paucos, dein propalam in vulgus pro cunctis.

tore segnem pro cauto timidum, adfingens vicina virtutibus vitia, compellabat; *premendorum superiorum* quae pessima ars nimis prosperis multorum successibus crevit sese extollebat.

(a) An easy emendation for the corrupt reading of the MSS. 'premendorum superiorum' has been adopted by Madvig? (b) 'Adfingens vicina virtutibus vitia'—Cite a parallel from Horace.

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tions.

2. Translate and explain the following passages:—

(a) Tum experta nobilitas parum fuisse virium in competitoribus eius L. Aemilium Paulum, qui cum M. Livio consul fuerat et damnatione collegae et sua prope ambustus evaserat, infestum plebei diu ac multum recusantem ad petitionem compellit. is proximo comitiali die concedentibus omnibus, qui cum Varrone certaverant par magis in adversandum quam collega datur consuli.

(b) Itaque plebei scitum quo oneratus sum magis quam honoratus primus antiquo abrogoque, et . . . sub imperium auspiciumque tum redeo.

(c) Hoc multo magis in secundo ac tertio citato senatore est factum, ut ipsius penitere homines appareret, quem autem in eius substituerent locum, deesse, quia nec eodem nominari attinebat, nihil aliud quam ad audienda probra nominatos, et multo humiliores obscurioresque ceteri erant eis qui primi memoriae occurrebant. ita dilabi homines, notissimum quodque malum maxime tolerabile dicentes esse, iubentesque senatum ex custodia dimitti.

(d) Cohortandos, qui redempturis auxissent patrimonium, ut rei publicae, ex qua crevissent, tempus commodarent, conducereque ea lege praebenda quae ad exercitum Hispaniensem opus essent, ut, cum pecunia in aerario esset, iis primis solveretur.

3. Translate, with short notes where needed:—

Σκωδῶς ἐστὶν, ut suspicor, illis qui tenent, nullam cuiquam largitionem relinquere. Unus loquitur et palam adversatur adolescens Cario. Huic plausus maximi, consalutatio forensis perhonorifica, signa praeterea benevolentiae permulta a bonis impertiuntur, Fufium clamoribus et conviciis et sibilis consecantur. His ex rebus non spes, sed dolor est maior, cum videas civitatis voluntatem solutam, virtutem adligatam. Ac ne forte quaeas κατὰ λέκτρον de singulis rebus, universa res hoc est deducta, spes ut nulla sit aliquando non modo privatos, verum etiam magistratus liberos fore. Hac tamen in oppressione sermo in circulis dumtaxat et conviviis est liberior quam fuit. Vincere incipit timorem dolor, sed ita, ut omnia sint plenissima desperationis. Habet etiam Campana lex execrationem in contione candidatorum si mentionem fecerint, quo aliter ager possideatur atque ut ex legibus Iulii. Non dubitant urare ceteri: Laterensis existimatur laute fecisse, quod tribunatum pl. petere destitit, ne iuraret. Sed de re publica non libet plura scribere. Dispiceo mihi nec sine summo scribo dolore. Me taceo, ut oppressis omnibus, non demisso, ut tantis rebus gestis, parum fortiter. A Cesare valde liberaliter invitor in legationem illam, sibi ut sim legatus, atque etiam libera legatio voti causa datur. Sed haec et praesidii apud pudorem Pulchelli non habet satis et a fratris adventu me ablegat, illa et munitior est et non impedit quo minus adsim, quum velim.

4. Translate into Latin prose:—

I know it is to no purpose to advise you not to grieve; that is not my intention; for such a loss as yours cannot be received indifferently. But though your affection to him whom you loved so dearly, and your

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reason in valuing his merit did expose you to the danger of that sorrow which now oppresseth you; yet if you consult with that affection and with that reason, I am persuaded that you will see cause to moderate that sorrow; for your affection to that worthy person may tell you, that even to it you cannot justify yourself, if you lament his being raised to a degree of happiness far beyond any that he did or could enjoy upon the earth. And your reason will assure you that beside the vanity of bemoaning that which hath no remedy, you offend him whom you love, if you hurt that person whom he loved. Remember how apprehensive he was of your dangers, and how sorry for any thing that troubled you; imagine that he sees how you afflict and hurt yourself; you will then believe that he may censure you, if you pursue not his desires in being careful of yourself who was so dear to him. But he sees you not; he knows not what you do; well, what then? Will you do anything that would displease him if he knew it, because he is where he doth not know it? I am sure that was never in your thoughts.

Translate, with notes where necessary :

1. Nil erit ulterius, quod nostris moribus addat
Posteritas; eadem cupient facientque minores.
Omne in praecipiti vitium stetit! Utere velis,
Totes pande sinus. dicas hic forsitan, 'unde
Ingenium par materiae? unde illa priorum
Scribendi quodcumque animo flagrante liberet.
Simplicitas, cuius non audeo dicere nomen?
Quid refert dictis ignoscat Mucius, an non?
Pone Tigellinum: taeda lucetis in illa,
Qua stantes ardent qui fixo gutturo fumant,
Et latum media sulcum deducis arena'.
Qui dedit ergo tribus patris aconita velatur
Pensilibus plumis, atque illinc despicit nos?
Quum veniet contra, digito composes labellum:
Accusator erit, quiverbum dixerit, 'hic est'.
2. Paulus vel Cosmus vel Drusus moribus esto;
Hos ante effigies maiorum pone tuorum;
Praecedant ipsas illi te consule virgas.
Prima mihi debes animi bona; sanctus haberi
Iustitiaeque tenax factis dictisque mereris,
Agnosco procerem. Salve, Gaetulice, sou tu
Silanus, quocumque alio de sanguine, rarus
Civis et egregius patriae contingis ovanti!
Exclamare libet, populus quod clamat Osiri
Invento. Quis enim generosum dixerit hunc, qui
Indignus genere et praeclearo nomine tantum
Insignis? nanum cuiusdam Atlanta vocamus,
Aethiopem cygnum, parvam extortamque puellam.
Europen; canibus pigris scabieque vetusta
Levibus et siccae lambentibus ora lacernae
Nomen erit pardus, tigris, leo, si quid adhuc est,
Quod fremit in terris violentius. Ergo cavebis
Et metues, ne tu sis Oreticus aut Camerinus.
3. O mihi curarum pretium non vile mearum,
Flaoce, Antenorei spes et alumne laeis,

Pierios differ cantus citharamque sororum ;
Aes dabit ex istis nulla puella tibi.
Quid petis a Phoebos? nummos habet arca Minervae ;
Haec sapit, haec omnes fenerat una deos.
Quid possunt hederæ Bæchi dare? Palladis arbor
Inclinat varias pondere nigra comas.
Præter aquas Helicon et sorta lyrasque dearam
Nil habet et magnum, sed perinane sophos.
Quid tibi cum Cirrha? quid cum Permesside nuda?
Romanum propius divitiisque forum est.
Illic aera sonant: at circum palpita nostra
Et steriles cathedras basia sola crepant.

5. Condita cum tibi sit iam sexagesima measis
Et facies multo splendeat alba pilo,
Discurris tota vagus urbe, nec ulla cathedra est,
Cui non mane feras irrequietus Aeve;
Et sine te nulli fas est prodire tribuno,
Nec caret officio consul uterque tuo;
Et sacro deciens repetis Palatia olivo
Sigerosque meros Partheniceque sonas.
Haec faciant sane iuvenes: deformius, Afer,
Omnino nihil est ardelione sene.

5. Translate and explain:

- (a) quamvis quota portio faecis Aehæi.
(b) Transi
Gymnasia atque audi facinus maioris abollæ.
(c) Inde cadunt partes ex foedere pragmaticorum.
(d) Et madidis cantat quæ Socratus alia.
(e) Vicinus Novio vel inquilinus
Sit, si quis Novium videre non volt.
(f) In jus, o fallax atque infitiator, eamus;
Aut vive aut deciens, Scaevola, redde deis.
(g) Nihil colonus vilicusque decoxit.
(h) Cur non mensa tibi ponitur a pedibus?

Unseen Latin.

6. Non ego nunc tristes vereor, mea Cynthia, Manes,
Nec moror extremo debita fata rogo:
Sed ne forte tuo careat mihi funus amore,
Hic timor est ipsis durior exequiis.
Non adeo leviter nostris Puer luescit ocellis,
Ut meus oblito pulvis amore vacet.
Illic Phylacides incundæ coniugis heros
Non potuit caecis inmemor esse locis,
Sed cupidus falsis attingere gaudia palmis
Thessalis antiquam venerat umbra domum.
Illic quicquid ero, semper tua dicar imago:
Traicit et fati litora magnus amor.
Illic formosæ veniant chorus heroinæ,
Quas dedit Argivis Dardana præda viris;

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Quarum nulla tua fuerit mihi, Cynthia, forma
Gratior, ot Tellus hoc ita insta simat.
Quamvis te longae remotentur fata senectae,
Cara tamen lucrimis ossa futura meis :
Quae tu viva mea possis sentire favilla !
Tum mihi non ullo mors sit amara loco.

7. Translate into Latin Hexameters :—

There is a beautiful spirit breathing now
Its mellow richness on the clustered trees,
And, from a breaker full of richest dyes,
Pouring new glory on the autumn woods,
And dipping in warm light the pillar'd clouds.
Morn on the mountain, like a summer bird,
Lifts up her purple wing ; and in the vales
The gentle wind, a sweet and passionate wooer,
Kisses the blushing leaf, and stirs up life
Within the solemn woods of ash deep crimson'd,
And silver beech and maple yellow-leaved,
Where Autumn, like a faint old man, sits down
By the way side a-weary.

THE ENGLISH LANGUAGE.—*Examiner, Professor Yonge, M.A., Oxon.*

1. The language used in England since the Conquest has been divided by modern grammarians into Semi-Saxon, Old English, Middle English, Modern English. State, as nearly as you can, the time at which each superseded its predecessor, the principal differences which each successive change introduced ; and mention one or two of the most eminent authors in each ; with any observations on their writings and abilities which may occur to you.

2. Were any other languages, besides modifications of Saxon or of English, in common used in England during the Middle Ages ? If so, what were these languages ; and when, and from what causes did each or any of them prevail ?

3. How far does Shakespeare usually adhere to historical truth in his historical dramas ? And to what extent is his practice in this respect exemplified in *Henry VIII.* ?

4. Give the character of Wolsey as delineated in the play when the news of his death reaches the court.

5. Give some account of satire and satirists in England, comparing it and them, as far as your knowledge of Latin and French may enable you to do so, with the poetry and poets of the same class in those languages.

6. Write notes on the following passages :—

And Congreve lov'd and Swift endur'd my lays,
The courtly Talbot, Somers, Sheffield read,
Ev'n mitred Rochester would nod the head ;
And St. John's self, great Dryden's friends before,
With open arms receiv'd one poet more.
Bear, like the Turk, no brother near the throne,
Proud as Appollo on his forked hill
Sate full blown Bufo, puffed by every quill,
Fed with soft dedication all day long ;
Horace and he went hand-in-hand in song.

Satire's my weapon, but I'm too discreet
To run a muck, and tilt at all I meet ;
I only wear it in a land of Hector's,
Thieves; supercargoes, sharpers and directors.
Peace is my dear delight, not Fleury's more.

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7. What account does Macaulay give of the general state of education and learning in England in the first three quarters of the 17th century.

8. Write a brief essay on the genius of either Milton; or Pope; or Hume; or Walter Scott; or Byron; or Wordsworth; illustrating your remarks by quotations from, or references to, some of their works.

MODERN LANGUAGES.—*Examiner, Professor Meisener.*

FRENCH.

Translate into French :—

1. Though he studies a great deal, he makes very little progress. I shall see him before I go into the country. I accompanied your sister as far as the bridge. He will go in spite of you. I shall soon go to sleep. These works have their merit, every one appreciates their value. The tree I prefer is the oak. What a beautiful thing! The most trustworthy historians have related these facts.

2. Johnson grown old is better known to us than any other man in history. But we have no minute information respecting those years of Johnson's life during which his character and his manner became immutably fixed. We know him, not as he was known to the men of his own generation, but as he was known to the men whose father he might have been. That celebrated club of which he was the most distinguished member contained few persons who could remember a time when his fame was not fully established, and his habits completely formed.—MACAULAY.

Translate into English :—

1. Leurs feux de bataillon, en grimpant la colline, nous couvraient de fumée, parce que le vent soufflait de notre côté, ce qui nous empêchait de les voir. Malgré cela, nous avions commencé nos feux de file. On ne s'entendait et l'on ne se voyait plus depuis au moins un quart d'heure, quand tout à coup les hussards prussiens furent dans notre carré. Je ne sais pas comment cela s'était fait, mais ils étaient dedans et tourbillonnaient à droite et à gauche en se penchant sur leurs petits chevaux, pour nous hacher sans pitié. Nous leur donnions des coups de hachette, nous criions, ils nous lâchaient des coups de pistolet; enfin c'était terrible.—ZÉBÉDÉ, le sergent Pinto et une vingtaine d'autres de la compagnie nous tenions ensemble.—Je verrai toute ma vie ces figures pâles, les moustaches allongées derrière les oreilles, les petits shakos serrés par la jugulaire sous leurs mâchoires; les chevaux qui se dressent en hennissant sur des tas de morts et de blessés.—ERCKMANN-CHATRIAN.

2. Muse, c'est donc en vain que la main vous dérange
S'il faut rimer ici, rimons quelque louange;
Et cherchons un héros, parmi cet univers,
Digne de notre encens et digne de nos vers.
Mais à ce grand effort en vain je vous anime;

Je ne puis pour l'ouïr rencontrer une rime ;
Dès que j'y veux rêver ma veine est aux alois.
J'ai beau frotter mon front, j'ai beau mordre mes doigts,
Je ne puis arracher du creux de ma cervelle
Que des vers plus forcés que ceux de la Pucelle.
Je pense être à la gêne ; et, pour un tel dessein,
La plume et le papier résistent à ma main.—BOILEAU.

PHILOLOGICAL QUESTIONS.

1. Show that the Romance languages cannot be derived from Classical Latin.
2. Of what process of derivation are the following words examples :—*soleil, sommeil, taureau* ?
3. Give the etyma of *lère, géant, froid*, and remark on the change of the Latin middle consonant.
4. Explain the origin of the *u* in the following forms : *du, cheveu, Thibaut*.

GERMAN.

Translate into German :—

1. We shall expect you next week. The best man is not without faults. Will you lend me your German grammar ? They are strangers. By this you will know him. The books which I require, must be ordered from Leipzig. Have you lost anything ? I have been four times in Germany. It is five o'clock. We see each other very seldom. The boys come from school. The castle was built three hundred years ago. Wait, till I have finished my work. After it has lightened, it thunders. We shall remain in town, as long as the bad weather continues. The enemy has been put to flight. May I use your pen ? What am I to do ? I have been obliged to write a letter. He will be obliged to obey.

Translate into English :—

2. Eugen, nach Wien zurückgekehrt, behielt ansehnlich durchaus die bisherige hohe Stellung als Präsident des Hofkriegsrathes und Generalgouverneur der Niederlande. Aber sein persönliches Verhältniß zum Kaiser war gestört. Seine spanischen Gegner verhaszten kaum den Wunsch, ihn völlig aus Oesterreich zu entfernen ; er selbst warnte wohl seine Freunde, bei irgend einer Bitte sich nicht von ihm empfehlen zu lassen weil dann die Abweisung sicher sei. Anerkannter Moosherzog war er das Haupt der deutschen Partei des Hofes, und nach wie vor in engem Verhältniß mit Staßemburg, der sich übrigens so viel wie möglich aus den politischen Streitigkeiten hinter seine Finanztabellen zurückzog. Die Lage war um so gefährlicher, als ein Theil der deutschen Staatsmänner, wie die Grafen Schlick und Windischgrätz, obwohl den Spaniern gleich feindselig, aus persönlicher Eifersucht auch von Eugen sich trennten und eine dritte Partei bildeten.—STRAUS.

2. Nein, ich ertrag' es länger nicht. Ich sage
Mich laß von diesem König, der unräthlich
Sich selbst verläßt. Mir blutet in der Brust
Das tapf're Herz, und glühnde Thränen möcht' ich weinen,
Dass Räuber in das königliche Frankreich
Sich theilen mit dem Schwert die edeln Stätte,
Die mit der Monarchie gealtert sind,
Dem Feind die roß'gen Schüssel überliefern,
Indess wir hier in thatenloser Ruß
Die köstlich edle Rettungseile verschwenden.—SCHILLER.

SCIENCE SCHOLARSHIPS.—FIRST YEAR STUDENTS.

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ARITHMETIC AND ALGEBRA.

1. *A* and *B* starts on a walking race *A* giving *B* 1 mile odds. *A* starts at the rate of 1 mile in $12\frac{1}{2}$ minutes, and takes half-a-minute more to walk each mile than the one before it. *B* starts at the rate of 1 mile in 15 minutes, and takes a third of a minute more to walk each mile than the one before it. Find in how many minutes *A* overtakes *B*.

Interpret the second solution of the quadratic.

2. It costs £5 to feed 16 horses on hay and oats for 7 days, the oats for each horse costing twice as much as the hay. Hay rises in value 20 per cent., and oats fall 20 per cent. How much will it cost now to feed 10 horses for 11 days, each horse getting as much hay and oats as before?

3. Find to three decimal places the area of the segment of a circle of unit radius cut off by a chord equal to the radius. Given that $\pi = 3.1416$.

4. Express $\frac{7}{13}$ as a circulating decimal. Show from the theory of circulating decimals that every number, which is not divisible by 2 or 5 goes without a remainder into some number of the series 9, 99, 999, &c.

5. Define a logarithm of a number to a given base. Show that $\log_a a$, $\log_a b$, $\log_a c = 1$.

$$\text{Given } \log 2 = 0.30103 \quad \log 3 = 0.47712$$

Find $\log(120)$ and $\log(15000)$ and hence find limits between which $\log 11$ must lie.

6. Find the highest common factor of the expressions $x^4 - 57x^2 + 40x + 6$ and $x^4 - 4x^3 - 23x^2 + 18$.

7. Prove that $a^2 + b^2 + c^2 - bc - ca - ab$ is essentially positive, whatever real values are assigned to abc .

8. Find the coefficient of x in $(a - 2x)^{13}$ and of x^2 in $(1 - x + x^2 - x^3)^{10}$. Prove that the sum of the coefficients of two consecutive powers of x in $(1+x)^n$ is equal to the coefficient of the higher power in $(1+x)^{n+1}$.

9. Solve the equations

$$(a) \quad (x-a)(x-b) = c^2.$$

$$(b) \quad \sqrt{\frac{1}{x} - 1} + \sqrt{x+1} = \sqrt{\frac{3}{x}}$$

$$(c) \quad x^2 + \frac{1}{x^2} = \frac{3}{2} \left(x + \frac{1}{x} \right) - \frac{5}{9}$$

10. Solve the equation

$$\sqrt{\frac{1}{a^2} - \frac{1}{x^2}} + \sqrt{\frac{1}{b^2} - \frac{1}{x^2}} + \sqrt{\frac{1}{c^2} - \frac{1}{x^2}} = \sqrt{\frac{1}{a^2} + \frac{1}{b^2} + \frac{1}{c^2} - \frac{1}{x^2}}$$

11. Given $x+y = \frac{c^2}{xy}$ $x^2+y^2 = a^2$; find x and y .

12. Define x^m where m is a fraction or a negative quantity, and show in accordance with your definition that for all values of m and n

$$x^m x^n = x^{m+n}.$$

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GEOMETRY AND TRIGONOMETRY.

1. If two triangles have one angle of the one equal to one angle of the other, and the sides about the equal angles proportional the triangles are similar.

2. The square of the side of a regular pentagon inscribed in a circle is equal to the sum of the squares of the sides of a regular hexagon and of a regular decagon inscribed in the same circle.

3. From a fixed point C two variable lines CA and CB are drawn, making a constant angle to meet a given line; show that the circle circumscribing ABC touches a given circle.

4. Draw a circle to touch a given line to touch a given circle externally and to pass through a given point P .

When a solution is possible there are generally two circles that satisfy the conditions; find the locus of the point P when it is so situated that these two circles touch one another.

5. Given $\sin\theta = \frac{1}{3}$ calculate $\tan\theta$ and $\sin\frac{\theta}{2}$ each to three decimal places.

6. Prove the formulae

$$\cos\frac{1}{2}A = \sqrt{\frac{s(s-a)}{bc}} \quad \cos\frac{1}{2}(A-B) = \sin\frac{1}{2}C \cdot \frac{a+b}{c}.$$

7. Given $\tan(45^\circ - \theta) + \tan(45^\circ + \theta) = 4$; find θ .

8. Prove that in a triangle

$$2\sqrt{c}\cos\frac{1}{2}(A-B) = \sqrt{c+(a-b)\cos\frac{1}{2}C} + \sqrt{c-(a-b)\cos\frac{1}{2}C}.$$

9. Find $\sin 18^\circ$ and $\tan 53\frac{1}{2}^\circ$.

10. Given that

$$\sin 2\alpha \sin(\beta - \gamma) + \sin 2\beta \sin(\gamma - \alpha) + \sin 2\gamma \sin(\alpha - \beta) = 0$$

Show that either

$$\begin{aligned} \sin(\alpha + \beta) + \sin(\beta + \gamma) + \sin(\gamma + \alpha) &= 0 \\ \text{or } \sin(\alpha - \beta) + \sin(\beta - \gamma) + \sin(\gamma - \alpha) &= 0 \end{aligned}$$

11. Two radii of a circle of radius unity OA and OB are drawn at an angle of 45° , and a tangent AC is drawn meeting OB produced in C . Another circle is inscribed in the figure formed by the circumference of the first circle, and the lines AC and BC show that its radius (x) is given by the equation

$$-x(1 + \sqrt{2}) + 2\sqrt{x} = 1$$

12. A variable circle touches the sides AC and BC of a given triangle ABC and meets the base AB in PQ , if AP and BQ be denoted by x and y ; find the relation subsisting between x and y .

SECOND YEAR STUDENTS.

MATHEMATICS.—*Examiner, Professor Purser.*

1. If a right line is perpendicular to two right lines it is perpendicular to their plane.

Find the locus of the middle point of a right line of constant length terminated by two fixed non-intersecting right lines at right angles to one another.

2. Find the solid contents of a sphere and the superficial area of a circular cone.

3. Give some of the elementary theorems on the convergence of series

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tions.

Examine when the series $\frac{1}{1^n} + \frac{1}{2^n} + \frac{1}{3^n}$, &c., is convergent.

Prove that the series $\frac{x}{(1-x)^2} + \frac{x^2}{(1-x^2)^2} + \frac{x^4}{(1-x^4)^2} + \&c.$, and the

series $\frac{x}{1-x^2} + \frac{2x^2}{1-x^4} + \frac{3x^3}{1-x^6} + \&c.$ converge to the same limit when $x < 1$.

4. Assuming the exponential series investigate the series for the expansion of $\log(1+x)$.

Explain how you would proceed to calculate a table of logarithms.

Given $\log_e(2) = .69315$ $\log_e(3) = 1.09861$

Calculate to the same number of decimals $\log_e(5)$ and $\log_e(7)$.

5. Given the angles which the sides of a known triangle subtend to an observer in its plane; how would you calculate his distance from each vertex.

6. Prove that $\frac{a^m + b^m + c^m}{3} > \left(\frac{a+b+c}{3}\right)^m$

where a, b, c are positive quantities and m positive and greater than unity.

7. If $\frac{p}{q}, \frac{p'}{q'}$ are two consecutive convergents to a continued fraction.

Prove that $pq' - p'q = \pm 1$, and that the error induced by stopping at the convergent $\frac{p}{q}$ is less than $\frac{1}{qq'}$.

Express 3.14159 as a continued fraction, and find the first four convergents.

8. If lines be drawn from any point on the circumference of a circle to the vertices of an inscribed regular pentagon, the sum of the first, third, and fifth is equal to the sum of the second and fourth.

CO-ORDINATE GEOMETRY.

1. The equation of a given line meeting the axes in the points A, B , is $6x + 3y = 4$ the co-ordinates of a given point P are $x=1, y=1$

1° Find the equation of the line through P parallel to AB .

2° Prove that AB subtends a right angle at P .

3° Show that the feet of the perpendiculars let fall from P on AB and on the axes of co-ordinates lie in directum.

2. Prove the expression for the area of a triangle in terms of the co-ordinates of its vertices.

3. The equation of a circle is $ax^2 + ay^2 + 2gx + 2fy + c = 0$

1° Find the co-ordinates of its centre and the length of its radius.

2° The equation of the circle passing through the origin, and the points of contact of tangents drawn to the first circle from the origin.

4. The polar equations of two circles passing through the origin are $\rho = a \cos(\theta - \alpha)$ $\rho = b \cos(\theta - \beta)$; find the polar co-ordinates of their other point of intersection.

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tions.

CONIC SECTIONS.

[To be proved Geometrically.]

1. In a parabola if QV is the ordinate to the diameter PV . $QV^2 = 4FP.PV$.
2. In an ellipse the rectangle under the central perpendicular on the tangent and the semi-diameter parallel to the tangent is constant.
3. If two chords of an hyperbola intersect the rectangles contained by their segments are proportional to the squares of the parallel semi-diameters.
4. Prove that if a parabola be drawn with a point on an ellipse as focus and the tangent at the corresponding point of the auxiliary circle as directrix, it passes through the foci of the ellipse.

SPHERICAL TRIGONOMETRY.

1. Give Napier's rules for right angled-triangles. In a plane right-angled triangle the perpendicular from the right angle is a mean proportional between the segments of the hypotenuse, and each side is a mean proportional between the hypotenuse and the adjacent segment. Investigate corresponding relations for a right angled spherical triangle.

2. Prove that

$$\sin \frac{1}{2}(A-B) = \cos \frac{1}{2}C \cdot \frac{\sin \frac{1}{2}(a-b)}{\sin \frac{1}{2}c}$$

3. From a given point on the intersection of two given planes, two variable lines are drawn one in each plane at right angles to one another; find the relation between the angles these lines make with the line of intersection of the planes.

4. Prove that in a spherical triangle the intersection of perpendiculars let fall from the vertices on the opposite sides is the centre of the circle inscribed in the triangle formed by their feet.

DIFFERENTIAL CALCULUS.

1. Define a differential coefficient.

Obtain directly from the definition the differential coefficient of

$$\tan x, \frac{1}{\sqrt{x}}, \frac{1-x}{1+x}$$

2. Differentiate

$$\frac{2x+1}{\sqrt{1+x+x^2}}, \tan^{-1}\left(\frac{\tan x}{\sqrt{2}}\right), \log\left(\frac{1-x-\sqrt{2}\sqrt{1+x^2}}{1+x}\right).$$

3. Examine by the differential calculus for what value of θ $\frac{2+\cos\theta}{\sin\theta}$ is a minimum.

4. What is the Geometric meaning of $\frac{dy}{dx}$ where x and y are the rectangular co-ordinates of a point on a given curve.

Show that the curves $y^3 = ax^2$, $x^3 = ay^2$ intersect at right angles at the origin, and elsewhere at the angle $\tan^{-1}\frac{5}{12}$.

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NATURAL PHILOSOPHY.—*Examiner, Professor Everett.*

EXPERIMENTAL PHYSICS.

1. Prove, as a consequence of Boyle's law, that, in an atmosphere of uniform temperature, the pressure would diminish in geometrical progression for heights increasing in arithmetical progression.
2. If a certain mass of air occupies a space of 1 litre, when at temperature 0°C and a pressure of 1 atmosphere; what space will it occupy at the same pressure and t° ? Assuming your answer to be rigorously correct for all temperatures, calculate the temperature at which the volume would be zero. What name is given to the temperature thus calculated?
3. Describe Faraday's "ice-pail experiment" and point out the conclusions deduced from it.
4. State the principal laws of the mechanical action of one current upon another. What name is given to the branch of electrical science which treats of such action?
5. If the motion of a point is compounded of two simple vibratory movements of equal amplitude, in two directions at right angles to each other, the periods of the two components being nearly but not quite equal, trace the curves described.
6. An object of finite size is seen by two reflections from plane mirrors. Trace the whole course of the rays by which the second image is seen, the observer's eye being regarded as a point.
7. A very distant object on the axis of a convex lens of focal length F inches, sends rays to the lens, which are intercepted, 1 inch short of the principal focus, by a concave lens of focal length $1 + \frac{1}{F}$ inches. Where will the final image be situated, and what angle will its diameter subtend at the centre of the concave lens, as compared with the angle subtended by the diameter of the object?
8. Investigate the formula for determining the specific gravity of a solid by means of Nicholson's Hydrometer.
9. What relation has been found to exist between the emissive and absorbing powers of substances for rays of heat or light. Point out an important application of this principle to the solar spectrum.

NATURAL HISTORY.—*Examiner, Dr. Cunningham.*

MINERALOGY, GEOLOGY, AND PHYSICAL GEOGRAPHY.

1. Give the names and characters of the systems of crystals usually recognised by mineralogists.
2. State the characters of the following minerals:—Hornblende, Actinolite, Prehnite, Pyrite, Galena, and Bornite.
3. To what group of strata do the Llandovery beds appertain? Where do they occur in the British islands? Mention a few of their characteristic fossils.
4. What is the distribution of the Jurassic and Cretaceous strata in Ireland.
5. Mention some of the genera of Cephalopods which abounded in the Silurian epoch.

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tions.

6. What are Dicynodonts, and where have their remains been met with?
7. To what group of animals is the Nummulite referable, and what formation is its characteristic.
8. Give an outline of the distribution of recent volcanoes.
9. Give a brief description of the disposition of the principal warm oceanic currents.

CHEMISTRY.—*Examiner, Dr. Andrews.*

The first seven questions of the paper used in the examination for the Second Year Medical Scholarship were used for this examination.

THIRD YEAR STUDENTS.

NATURAL PHILOSOPHY.—*Examiner, Professor Everett.*

1. A unit of time and a unit of mass having been selected, how is the unit of force defined, and what is the corresponding unit of work? Show that the work done by gravity on a body which falls from rest until it acquires a velocity v , is $\frac{1}{2}mv^2$.
2. Investigate the dimensions of *acceleration*, in terms of *length* and *time*. If the acceleration of a falling body is 32 when the foot and second are the units, what is its numerical value when the inch and minute are the units?
3. Investigate the dimensions of *quantity of electricity*, *potential*, and *capacity*, in electrostatic measure.
4. Three forces, P , Q , R acting upon a point and keeping it at rest, are represented by lines drawn from that point. If P be given in magnitude and direction, and Q in magnitude only, find the locus of the extremity of the line which represents the third force R .
5. A uniform heavy square rests with its plane perpendicular to a smooth wall, one corner being attached to a point in the wall by a string whose length is equal to a side of the square; show that the distances of three of its angular points from the wall are as 1, 3, and 4.
6. A and B are the highest and lowest points of a vertical circle, and P is any point on the circumference. Two particles fall without friction along the cords AP , and PB , starting simultaneously from rest at A and P . Show that the least distance between them is equal to the distance of P from AB .
7. An observer looks at an object through a lens placed at any intermediate distance. Show that if the eye and the object were to change places, the angle subtended by the image at the eye would remain unchanged.

MEDICAL SCHOLARSHIPS.—SECOND YEAR STUDENTS.

ANATOMY AND PHYSIOLOGY.—*Examiner, Dr. Redfern.*

1. Describe the characters by which the following bones taken from the right side of the body, may be distinguished from other bones:—the third and fourth metacarpal,—the second and third metatarsal,—and the three cuneiform bones of the foot.

2. Describe the interossei muscles of the hand and their action.
3. Give an account of the anatomy of the roots of the lungs, including the relations of the parts entering into them, and of those which are outside the roots.
4. State the microscopical characters of nerves and nerve centres.
5. State the circumstances, occurring during life or after death, whether from natural causes or in experiments, which influence the death and decomposition of muscular tissue; and state precisely the facts which have been observed in connexion with them.

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tions.

NATURAL HISTORY.—*Examiner, Dr. Cunningham.*

ZOOLOGY.

1. Give a short account of the structure of Siphonophora.
2. Briefly describe the structure and arrangement of the hard parts of Crinoidea.
3. In what groups of animals is a pseudo-lacmal system present?
4. State the characters and main subdivisions of Hemiptera.
5. State the characters of Plectognathi and Lophobranchii.
6. Describe the skeleton in Pterosauria.
7. Describe the usual structure of the pelvis in birds, and mention any deviations from it.
8. State the characters of the sub-orders of Marsupialia.

BOTANY.

1. Describe the structure of the following fruits:—Regma, Diachaenium, Tryma, Glans, Samara, Nuculanum, Hesperidium.
2. Describe the various modifications of valvular dehiscence in fruits.
3. Mention the more noteworthy points in the morphology of the floral envelopes in the following genera of Ranunculaceae:—Aconitum, Delphinium, Anemone, Ranunculus, Helleborus, Paeonia.
4. Describe the structure of the flower in Fumaria. By what characters are Fumariaceae distinguished from Papaveraceae?
5. Explain the meaning of the following morphological terms:—cohesion, adhesion, abortion, petalody, staminody.
6. Describe the usual structure of the stem in Monocotyledons, and mention any deviations therefrom.
7. State the characters of Valerianaceae and of Dipsaceae.

CHEMISTRY.—*Examiner, Dr. Andrews.*

1. What reactions take place when chlorine gas is passed under different conditions through a solution of caustic potash?
2. In what proportions do gaseous bodies combine by volume? Illustrate your statements by examples.
3. Give an account of the sources of iodine, its mode of extraction and tests.
4. What are the characteristic tests for the ferrous and ferric salts?
5. Describe the preparation and properties of the arsenious and arsenic acids.
6. Give an account of the law of the diffusion of gases through porous septa.
7. Write the constitutional formulas of SO_2 , H_2O , SO_3 , KHO and KNO_3 .

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tions.

8. Explain the substitution of chlorine, bromine and certain compound radicals in organic bodies, for hydrogen, and give examples.
9. What is the composition of chloroform, and how is it prepared?
10. Explain what is meant by a monatomic, diatomic, &c., alcohol, and mention alcohols belonging to each class.
11. Give an account of etherification, and of the chemical changes which occur in the process.
12. How are the fatty acids prepared from the natural fats, and in what chemical relation do they stand to the alcohols?
13. What are the proximate constituents of blood?

THIRD YEAR STUDENTS.

ANATOMY AND PHYSIOLOGY.—*Examiner, Dr. Redfern.*

1. Describe the characters of the shafts of the ulna, humerus, and fibula, and their markings for the attachments of muscles.
2. Give a full account of the lumbricales muscles of the hand and their actions and uses.
3. Describe the Eustachian valve, and the valve of the foramen ovale, in their different states during uterine and extra-uterine life, and their uses.
4. State what you know of the action and uses of the liver.
5. Describe the modes of ending of nerves at their periphery.

PRACTICAL CHEMISTRY.—*Examiner, Dr. Andrews.*

1. In a solution containing cane sugar and glucose, how would you determine the amount of each, either by chemical or optical tests, or by a combination of both?
2. Describe the method of analysing magnetic iron ore.
3. How would you distinguish the phosphate of alumina from alumina itself.
4. Give an account of the tests for the meconic, citric, tartaric and oxalic acids.
5. How would you analyse a mixture of nitrogen, oxygen, hydrogen and marsh gas?
6. Calculate how many cubic centimetres of carbonic acid gas at 0°C, and under a pressure of 760 millimetres will be formed by the fermentation of 1 gramme of glucose ($C_6H_{12}O_6$), assuming that carbonic acid and alcohol alone are formed in the process.
7. How would you analyse a mixture (in solution) of the arsenious and arsenic acids?
8. How would you distinguish the ferric phosphate from the ferric arseniate?

[The Candidates were also examined in Qualitative analysis.]

FOURTH YEAR STUDENTS.

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tions.

ANATOMY AND PHYSIOLOGY.—*Examiner, Dr. Redfern.*

ANATOMY.

1. Give an account of the development of the vertebrae, sacrum, and coccyx.
2. Give a short account of the parts which require to be removed to expose the supinator brevis muscle, and indicate their relative position.
3. Describe the structure and movements of the tongue, and state what muscles are concerned in the production of each.
4. Give a short account of the branches of the vagus nerve, with the distribution and function of each.
5. Describe the sympathetic nerve and its branches in the chest.

PHYSIOLOGY.

1. Give an account of the act of walking, and of the muscles employed in it.
2. Describe the acts of sighing, yawning, sobbing, hiccup, laughing, crying, coughing, and sneezing—their causes—and modes of production.
3. State shortly the characters of structure, and the chemical changes on which you rely as to the functions of the intestines.
4. Give an account of the structure, and supposed functions of the thymus body, stating the facts on which the suggestions as to function are based.
5. Describe the connections of the cerebellum with other parts of the nervous centres:—state the theories which have been advanced as to its function, and the facts on which they rest.

SURGICAL ANATOMY.—*Examiner, Dr. Gordon.*

1. Describe the signs of a strangulated Bubonocoele, the operation for its relief, the parts divided, and the seat of structure.
2. Describe the operation of Tracheotomy, mentioning the parts exposed and divided, and those varieties in the distribution of vessels which render the operation extremely hazardous.
3. Describe the relations of the processes to each other at the elbow joint, and the alterations which take place in the various dislocations and fractures.

PRACTICE OF MEDICINE.—*Examiner, Dr. Canning.*

1. What are the causes of active Hyperaemia?
2. How is Thrombosis produced?
3. Give the diagnosis of simple from tubercular Meningitis.
4. What are the symptoms, and what the treatment of Diphtheritic Paralysis?
5. How would you treat a case of Gangrene of the Lung?
6. How would you distinguish Hypertrophy from Dilatation of the Heart.
7. Give the symptoms and diagnosis of Intercoastal Neuralgia.

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

Examiner, Robert Foster Dill, M.D.

1. What is the age at which we should expect the highest degree of fecundity in woman? At what age is the wave of puerperal mortality lowest?
2. What are the measurements, form, and weight of the unimpregnated uterus? What are the anatomical relations of the unimpregnated uterus to the neighbouring organs?
3. Describe the mechanism of natural labour, and especially the relations of the fetal head to the pelvis, in the third and fourth positions, from the time it enters the brim until it escapes from the vulva.
4. Mention any circumstances which have been assigned as causes of malposition of the fetus in utero.
5. Classify the deformities of the female pelvis, and briefly state the proximate cause of the deformity in "Nægele's pelvis."
6. State some of the theories as to the determining cause of parturition.
7. What are the duties of the accoucheur in each stage of natural labour?
8. How is hysteritis to be distinguished from hysteralgia? What is the appropriate treatment in each case?
9. Where would you expect to hear most distinctly the sounds of the fetal heart and the placental souffle? Describe the manner in which the active motions of the child in utero may be discovered. What is the value of each as a sign of pregnancy?
10. What are the symptoms, pathology, prognosis, and treatment of puerperal eclampsia?
11. What is the pathology of puerperal fever?
12. Name the different displacements of the uterus. What are the causes, diagnosis, prognosis, and treatment of complete inversion of the uterus?
13. Prescribe a carminative mixture, containing muriate of morphia, for an infant six months old.

MEDICAL JURISPRUDENCE.—*Examiner, Professor Hodges, M.D., F.O.S.*

1. Describe the post mortem appearance found when death has been produced by drowning.
2. What evidence may be obtained from the chemical examination of the stomach of a child, in cases of supposed infanticide?
3. State the poisonous dose of acetate of morphia, the amount of morphia contained in opium, and the methods used to separate morphia from the contents of the stomach.
4. What are the objections to iodic acid as a test for morphia, and how are you to proceed so as to obviate them?
5. Describe the distillation process for the separation of arsenic from organic matters.
6. State the poisonous dose of the following substances:—arsenious acid, corrosive sublimate, strychnine, cantharides, nux vomica.

LAW SCHOLARSHIPS.—FIRST YEAR STUDENTS.

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REAL PROPERTY.—*Examiner, Professor Molguez.*

1. A grants Blackacre to B, A devises Whiteacre to B; both in the year 1870. How do these dispositions severally operate? State the reason for such operation in each.

2. Where an estate is granted for life *without impeachment of waste*. Is there a limit to such privilege? and if so, what is that limit? And state by what authority is the transgression of that limit restrained.

3. Grant of land to A and B and to C and their heirs (A and B being husband and wife). A dies before partition. To what estates, and in what proportions, are the survivors entitled? And in what relation do they stand as to such estates?

4. Why, and how does a conveyance by lease and release operate so as to dispense with livery of seisin?

5. What is the difference between a trust and a use in their origin and their effect in conveyance?

6. How does a vested remainder differ from a contingent remainder in relation to the particular estate?

7. What are the two kinds of terms of years as distinguishable in their object?

8. By what operation of law does a legal estate in land pass (by the appointment by the donee of a *naked power*) to the object of the power on its execution?

9. What estate is created by a grant to A B, and his heirs male?

10. A purchases an estate in fee-simple, and dies intestate, leaving (his sole relations) a younger brother, and the children of a deceased elder brother, consisting of two sons and two daughters. By what rules of descent in such case is the heir to be ascertained.

11. How does tenant in tail "possibility of issue extinct" arise?

12. For what reason is it that the assignor of a lease should, in a deed of assignment of that lease, insist upon a covenant of indemnity on the part of the assignee, against breaches of the covenants of the lease itself committed by the assignee *after* the date of the assignment? And why is the same assignee not entitled to a like covenant of indemnity upon his assigning the same lease to a second assignee?

13. What was the mode by which estates in quasi tail were barred before the 4 & 5 Will. IV.?

14. State historically how vicarages arose, and how tithes came to be lay property?

15. To what extent does the ascertainment of the heir of tenant in tail coincide with that of tenant in fee-simple?

16. How does *Execut* differ from *Forfeiture*?

17. For what reasons has it appeared that the constitutional principle which excludes arbitrary will in the exercise of the judicial function has led to greater uncertainty and litigation in the construction of wills than in that of deeds?

State what classes have been provided for by the Statute of Wills, 1 Vict., in mitigation of that inconvenience.

18. Grant of Blackacre to A for life, with remainder to his heirs; Grant of Whiteacre to B for life, remainder to the heirs of A. Whether is the word heirs a word of limitation or a word of purchase in those several cases? State the reason.

19. Grant to A and the heirs of his body, remainder to the first son

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tions.

of the first son who shall be born to B in fee-simple. What estate does the grandson of B take?

20. Where a devisee apprehends that the will may be impeached by the heir at law at some future period, but no proceeding has been taken by the heir at law to enable the devisee to set up the will, what course is open to the devisee under the present law?

JURISPRUDENCE.—*Examiner, Professor Leslie.*

1. What analogies does Sir H. Maine point out between Ancient Law and Modern International Law?

2. Define *Res Mancipi* and *Res nec Mancipi* and explain the origin of the distinction.

3. Explain the causes of the scantiness of archaic law.

4. "Usucapion did not lose its advantages until the reforms of Justinian."—*Ancient Law*, p. 286. What was Usucapion? How did it lose its chief advantages through Justinian's reforms?

5. Explain the terms, *Quasi-contracts*; *Quasi-delicts*; *Implied contracts*; and give an example of each.

6. Conveyances and contracts occupy, according to Sir H. Maine, a very different position in relation to each other in early and mature law respectively. Point out the difference referred to, and explain it.

7. State the canons of early Roman law regulating the devolution of inheritances, before they were modified by the *Prætors*.

8. How was the cognizance of Wills by the *Comitia Curiata*, in the earliest ages of Roman law, connected with the rights of the *Gentiles*?

9. State and criticize the distinction between *Civil Injuries* and *Crimes* drawn by Blackstone. What is the true distinction according to Austin?

10. State the distinction drawn by the Roman jurists between Public and Private Law, and add Austin's criticism.

11. Austin points out a distinction between *monarchies* and *aristocracies* in relation to *Constitutional Law*. State and explain the distinction.

12. Explain the authority of *Custom*, according to the view of the Roman jurists and Austin, respectively.

SECOND YEAR STUDENTS.

EQUITY.—*Examiner, Professor Molyneux.*

1. If A procure a conveyance of an estate in land from B, and afterwards sells the estate to C, under what state of facts will a Court of Equity decree relief to B against C?

If the land be situated in Ireland, and C's deed be registered before that of A, what operation will the Registry Acts have in reference to the transaction.

2. What is the operation of the Statute of Limitations in relation to cases of concealed fraud?

3. On what principle do Courts of Equity grant relief under the head of constructive fraud consistently with the maxim, "Fraud will not be presumed"?

4. When errors in point of law have been adopted on compromise, in

what instance will the compromise be upheld, and in what case set aside?

5. What elements are essential to entitle a party to relief in Equity grounded on mistake in fact?

6. What gave rise to the jurisdiction of Equity in the case of lost deeds?

7. What class of accident will not entitle a party to relief although the event has been unforeseen?

8. How is the equitable jurisdiction classified in its relation to that of courts of law?

9. In what instances will Courts of Equity admit parol evidence in reference to transactions, although within the terms of the Statute of Frauds?

10. On what grounds, and within what limit, will Courts of Equity set aside contracts for inadequacy of consideration?

11. Under what conditions will the charge of intoxication influence Courts of Equity in suits brought to set aside contracts on that ground?

12. State the nature of such agreements as are held to amount to Champerty.

13. What provisions of the Statute for conversion of leases for lives renewable for ever, into fee-farm grants, give equitable interests the operation of legal interests, and partial interests the effect of absolute interests?

14. How does the 4 and 5 Will. IV., in its provisions, give an effect to equitable estates in the machinery for barring estates tail, which was not admissible under the old proceeding by Common Recovery?

15. On what principle are trust-estates exempt from the ordinary failure of contingent remainders?

16. In what respect did Equity and Common Law differ in respect to Curtesy or Dower before the 3 & 4 Will. IV., ch. 74?

17. In the exercise of the powers of appointment of new trustees where the trust property consists of real estates Stock in the Government funds, choses in possession and choses in action. State, in detail, the several acts necessary to render the new trusts complete.

18. Creditors having agreed to accept a composition of 10 shillings in the pound at a future day named, all duly executed the composition deed containing the usual provisions and covenants; one creditor, having discovered that a sum of money had been secretly given by the debtor to another creditor to induce him to join in the composition, sues the debtor for the amount of the entire debt, and before the day named; the debtor thereupon files his bill in Chancery, setting up the composition deed, and praying for an injunction to restrain the creditor from prosecuting his suit at law, to which the creditor by answer states the above facts. What decree will the Court pronounce?

19. Indorsee of a bill of exchange loses it; and desires to recover the amount from the acceptor. Why was he formerly under the necessity of resorting to a Court of Equity to realize his claim? What was the nature of the decree made? How has the 17 and 18 Vict., ch. 125, relieved him from that difficulty?

20. Testator bequeaths personally to A B for life, and after his decease same to go to his children in such shares as A B should appoint.

The same testator devises real estate to trustees for the use of A for life, with a power after A's decease to sell it and divide the proceeds among the children of A. A dies, having omitted to execute either of those powers; the children file a bill in Chancery praying the Court to execute both powers, and for a general administration of testator's assets. What will be the decree of the Court upon that prayer?

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JURISPRUDENCE AND CIVIL LAW.—*Examiner, Professor Leslie.*

1. Describe the process of *feudalisation*, according to the account given in Maine's "Village Communities."
2. In what points, according to Maine's "Ancient Law," did Roman Law influence the feudal system?
3. "Market Law has had a great fortune in legal history."—*Village Communities*, p. 193. Explain this.
4. Sir H. Maine says: "The Roman distinction between the Law of Persons and the Law of Things, though extremely convenient, is extremely artificial." In what respect is it artificial, and in what respect convenient?
5. "The separation between the Law of Persons and the Law of Things has no meaning in the infancy of law." Explain this clearly.
6. Are there any criteria by which the more or less archaic character of a body of laws may be tested?
7. Comment on some of the foregoing tests, positive and negative, in respect of their more or less decisive character.
8. Explain the requisites for the acquisition of a title to property by *Usucapio*.
9. Classify *servitudes*, giving an example of each class.
10. Compare and contrast the English with the Roman law after Justinian's reforms, in respect to the succession to property *ab intestato*.
11. State the restrictions on the capacity of women in relation to the making of Wills, in Roman Law.
12. What were the two essential conditions to the validity of a *donatio mortis causa*?

THIRD YEAR STUDENTS.

COMMON LAW.—*Examiner, Professor Molyneux.*

1. What is the consideration which sustains the action on a common guarantee?
2. What redress has the assignee of a *chose in action* against the debtor? What parties must be made privy to the proceeding?
3. What are essential incidents to the constitution of a valid deed?
4. How does the liability of a common-law corporation aggregate differ from that of a registered joint stock company in relation to individual members? In what respect do the incidents of both bodies agree?
5. Under what circumstances is a company not liable upon an acceptance of a bill of exchange in its name by any member or members of it?
6. Why is a guarantee, given in confirmation of a previous contract, void?
7. To what extent does a *gratuitous bailee* become liable for the loss of a thing intrusted to him? And how does that of a *common carrier* differ?
8. What remedies are open to an intended lessee on an unfulfilled agreement for a lease?
9. What is the implied duration of a newly created tenancy from year to year?
10. Mortgage of a house and furniture; mortgagee does not go into possession; mortgagor becomes bankrupt. What effect has the bankruptcy on the mortgage?
11. Mortgagor continuing in possession after the execution of the mortgage, demises the mortgaged premises, and rent falls due under the demise, after which the mortgagee serves notice on the tenant to pay his

rent to him, and sues for the arrears due at the time of such notice; and an action is also brought against the tenant for recovery of the rent by the mortgagor. Which of them is entitled to recover? and why?

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tion.

12. What constitutes a *transitus* such as to entitle a vendor on the insolvency of the vendee to stop the goods sold, and resume possession of them as against the creditors of the vendee?

13. Tenant by lease becomes bankrupt; what are the rights and liabilities of the assignees of the bankrupt, the bankrupt tenant, and the lessor respectively?

14. Vendor has parted with the possession of goods to a purchaser in fulfilment of a contract procured by fraud on the part of the purchaser, who then sells them to a *bona fide* sub-purchaser? Again, goods having been procured by a person on false pretences are sold by him to a *bona fide* purchaser, not in market overt; how is the title of the respective ultimate purchasers affected by those several states of fact? State the reason.

15. A bill of exchange drawn by a person residing in England upon and accepted by a person residing in France. If the indorsee of the bill institutes suits severally against drawer and acceptor, how is the doctrine of *lex loci* applicable?

16. What are the several modes of enforcing the decrees of the Court of Chancery?

17. What are the respective and comparative powers of the Court of Chancery and the Landed Estates Court to bind persons by their orders?

18. To what extent and in what manner do Courts of Equity affect judgments at law?

19. When a deed is to be executed by an agent under a power of attorney; in what way is the agent to be constituted, and in what way is he to execute the deed so as to bind the principal, and bring him into direct privity with the covenantees named in the deed?

JURISPRUDENCE AND CIVIL LAW.—*Examiner, Professor Leslie.*

1. Write an account of the law of *Usucapio* before and after Justinian's reforms.

2. State the twofold source of obligations in Roman Law, and the chief classes of obligations referable to each of these sources.

3. The phrase *Jus tripartitum* is used in two different applications in the Institutes. State and explain them both.

4. Write a brief account of the chief changes in Roman Law between the time of Cicero and that of Gaius.

5. Write a brief account of the chief changes in Roman Law effected by Justinian.

6. Explain the terms, *dos*; *donatio propter nuptias*; *bona vacantia*; *res fungibiles*; *emphyteusis*; *superficies*; *pignus*; *hypotheca*.

7. How far has the distinction between *Jus Civile* and *Jus Naturale* or *Gentium*, influenced the classification of law in the Institutes?

8. Is there any instance in the Institutes of a legal consequence from the distinction referred to in the last question?

9. State and comment on the distinctions drawn by Austin between Roman and English Equity.

10. Contrast Austin's classification of primary rights with the divisions of the Law of Things in the Institutes.

11. Define a *Servitudo*. Where are *Servitutes* placed in the Roman arrangement of the Law of Things?

12. Mention and explain the different classes of *Servitutes*.

SENIOR SCHOLARSHIPS.

MODERN LANGUAGES.—*Examiner, Professor Meissner.*

FRENCH.

Translate into French :—

About the end of the twelfth century a new and singular species of magistracy was introduced into the Lombard cities. During the tyranny of Frederic I., he had appointed officers of his own, called *podestàs*, instead of the elective consuls. It is remarkable that this memorial of despotic power should not have excited insuperable alarm and disgust in the free republics. But, on the contrary, they almost universally, after the peace of Constance, revived an office, which had been abrogated when they first rose in rebellion against Frederic. From experience, as we must presume, of the partiality which their domestic factions carried into the administration of justice, it became a general practice to elect, by the name of *podestà*, a citizen of some neighbouring state, as their general, their criminal judge, and preserver of the peace.

HALLAM.

PHILOLOGICAL QUESTIONS.

1. *Mais, aimer* ; explain the two different processes, by which the *a* in these words has been modified by *i*.
2. *Il parloit, il parlait*. Give an historical account of these two modes of spelling.
3. Why are *courage* and *voyage* of the masculine gender, but *rage* and *plage* of the feminine ?
4. Account for the final *t* in *suit*.

Write a brief account, in French, of Ponsard.

GERMAN.—*Examiner, Professor Meissner.*

Translate into German :—

No observation is more common, and at the same time more true, than that one half of the world are ignorant of how the other half lives. The misfortunes of the great are held up to engage our attention ; are enlarged upon in tones of declamation ; and the world is called upon to gaze at the noble sufferers. The great, under the pressure of calamity, are conscious of several others sympathising with their distress, and have at once the comfort of admiration and pity.

There is nothing magnanimous in bearing misfortunes with fortitude when the whole world is looking on. Men in such circumstances will act bravely, even from motives of vanity. But he who, in the vale of obscurity, can brave adversity, who, without friends to encourage, acquaintances to pity, or even without hope to alleviate his misfortunes, can behave with tranquillity and indifference, is truly great : whether peasant or courtier he deserves our admiration, and should be held up for our imitation and respect.—GOLDENSMITH.

LITERARY QUESTIONS.

1. Explain the general purport of Lessing's *Laocoon*.
2. Give a brief account of Winkelmann.
3. Mention the principal members of the "*Göttinger Dichterbund*."

4. Characterize the style of Jean Paul.
5. Give an account of Byron's influence on German Literature.
6. Describe the reaction of German Literature on English Literature in the first half of the 19th century.

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tions.

HISTORY.—*Examiner, Professor Yonge, M.A., Oxon.*

1. What is the view taken by Hallam of the temper of the Parliament, and especially of the House of Commons (whether in the direction of independence or of servility) and of its influence and authority (whether increasing or declining) during the reigns of Edward VI., Mary, Elizabeth, and James I.?
2. Enumerate the principal grievances of which the Parliaments of Charles I. complained; pointing out how far, in your judgment, those complaints were well founded and important. Show how far the same causes of discontent existed in the reign of James II.; and describe the measures taken in the reigns of William and Anne to prevent any recurrence of those grievances.
3. Describe the origin and power of the States General, and of the Parliament in France.
4. The French Parliament has been charged with a continual series of attempts to encroach on the prerogative and authority of the Crown. What were the principal instances in which this encroaching disposition was displayed, and what treatment did the Parliament receive in the reign of Louis XV. from Fleury and from Maupeou?
5. In the seventy years that followed the Restoration of Charles II. what were the relations between Britain and France, and who were the statesmen in the two kingdoms to whose influence the changes which at different times took place in those relations are chiefly to be ascribed?
6. War broke out between Britain and Spain in 1739, and again in 1762. What were the circumstances which led to the rupture in each case? and what English ministers were chiefly affected in their fortunes and reputation by those events?

1. What were the constitutional principles involved in the different measures taken against Wilkes?
2. Describe the constitutional reforms projected by Turgot.
3. Give a sketch of the political career and character of William Pitt, 1782–1806.

CHEMISTRY.—*Examiner Dr. Andrews.*

1. Give an account of the application of the spectroscope to chemical analysis.
2. Calculate how many cubic centimetres of nitrogen at 10°C and under a pressure of 760 millimetres would be formed by the decomposition of 1 gramme of ammonia [weight of 1,000 c.c. air, at 0° and 760 mil. = 1.3 grammes.]
3. What are the chief laws of the heat of combination?
4. What is meant by the variation of equivalency? Illustrate your meaning by examples.
5. Explain the term dissociation, and show how dissociation has

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tions.

been applied to explain certain anomalies in the vapour densities of some compound bodies.

6. Give a general account of the aromatic hydrocarbons, and of their relations to one another, and to other important bodies.

7. Describe the process for preparing alizarine artificially.

[The Candidates were also examined in Chemical analysis.]

NATURAL HISTORY.—*Examiner, Dr. Cunningham.*

ZOOLOGY.

1. Give a short account of the structure and development of Cirripedia.

2. State those characters by which Ophiuridea may be distinguished from Asteroidea.

3. Mention some of the more important points in the structure of the Nudibranchiate Gasteropoda.

4. Give an outline of the structure and classification of Myriopoda.

5. What are the more important characters of the Ichthyopsida?

6. Give the names of the principal membrane bones in the Vertebrate cranium.

7. State the characters of the sub-orders of Ophidia.

8. Mention some of the more noteworthy points in the cranium of Cetacea.

BOTANY.

1. What is the nature of laticiferous tissue? Mention some natural orders characterized by the presence of a milky latex.

2. Give a short account of the modifications of phyllotaxis.

3. Give a short description of some of the more remarkable movements which have been observed in plants.

4. State the difference in mode of reproduction now known to exist between *Lycopodium* and *Selaginella*.

5. Describe the structure of the flower in *Viola*.

6. Mention the distinguishing characters of the following closely allied orders:—*Oxalidaceae*, *Geraniaceae*, *Balaninaceae*, and *Tropaeolaceae*.

7. State the characters, affinities and distribution of *Caryophyllaceae*.

8. In what respects do *Elretriaceae* and *Verbenaceae* differ from *Boraginaceae*?

METAPHYSICS.—*Examiner, Professor Park, M.A.*

1. "Descartes maintains that it is a mere self-deceit to suppose that things are perceived in the organ of sensation?"

2. What are according to Sir W. Hamilton the conditions of a true philosophy of consciousness?

3. "Though there is much knowledge that is purely representative, there is none that is purely presentative?"

4. "Whoever feels humbled by the relativity of his faculties . . . wants not to know *more* (for the more, however vast, would still be relative), but to know *differently*?"

5. Whence "arises the fact known to persons analytically inclined,

that when they think about any gratification they are receiving—speculate upon the cause of it, or criticise the object of it—the gratification is suspended" ?

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6. "Is the certainty of mathematical axioms compatible with an empirical origin of the conception of space?" Discuss this question, and point out any ambiguity you notice in its expression.

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tions.

7. "The law which attributes a cause to every event has to Mr. Mill no other *foundation, value, or extent*, than what it derives from experience" ?

8. Explain—(1) "I am not for changing things into ideas, but rather ideas into things." (*Philonous*).

(2) "You cannot say objects are in your mind, as books in your study; or that things are imprinted on it, as the figure of a seal upon wax. In what sense therefore are we to understand these expressions?" (*Hylas*).

(3) "May there not be still a third nature besides Spirits and Ideas?" (*Hylas*).

9. Give a short but clear account of Locke's Essay, Book IV., stating so far as you can the topics discussed in the several chapters.

10. Kant "closed the ancient gates through which man had gazed into Infinity; but in spite of himself he was driven . . . to open a side-door through which to admit the sense of duty, and with it the sense of the Divine. This is the vulnerable point in Kant's philosophy."

Explain and examine this statement.

GENERAL CLASS EXAMINATION AT THE END OF THE SESSION 1874-75.

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FIRST YEAR STUDENTS.

ENGLISH LANGUAGE AND LITERATURE.—*Examiner, Professor Yonge, M.A.*

1. Give an account of the causes which gradually led to the ancient language of these islands being superseded by other languages: pointing out what those other languages were; and to what extent each obtained and still preserves its influence; and pointing out also how far the accounts of the circumstances under which they became incorporated with the original language have a trustworthy historical foundation.

2. Explain the construction of sentences in which the different conjunctions, which are not merely copulative, are used.

3. What is the meaning of the term Aryan, and what are the principal languages which belong to the Aryan family?

4. "Seeing is believing." "To err is human, to forgive divine." How do you explain these constructions? Do you find any parts of Greek or Latin verbs used in a similar manner?

5. "I am to speak." "He is to blame." How does Dr. Latham explain these constructions?

6. What is the meaning of the terms "strong" and "weak" verbs?

7. Lay down the rules for the proper use of "shall" and "will."

8. Give some account of the life of Pope; and of his principal works.

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amination.

1. How far does Shakespeare adhere to historical truth in his historical dramas? Illustrate your opinions on this point by quotations from Julius Cæsar.

2. Write notes on the following passages :

Such instigations have been often dropp'd
Where I have took them up.

Here wast thou bay'd, brave hart,
Here didst thou fall ; and here thy hunters stand,
Sign'd in thy sport, and crimson'd in thy Lethe.

Do not talk of him

But as a property.

Let us do so ; for we are at the stake
And bayed about with many enemies.

3. Enumerate the topics chiefly dilated on by Antony in his funeral oration over Cæsar.

4. What does the Editor of the Clarendon Press Edition of the Essay on Man say of the general character of the age in which Pope lived ; and especially of the manner in which literature and literary men were affected by it ?

5. Write notes on the following passages :—

Awake my St. John ! leave all meaner things
To low ambition and the pride of kings.

But vindicate the ways of God to man.

When the dull ox, why now he breaks the clod,
Is now a victim, and now Egypt's god.

If plagues or earthquakes break not heaven's design
Why then a Borgia or a Otilio ?

Superior beings, when of late they saw
A mortal man unfold all nature's law,
Admir'd such wisdom in an earthly shape.

6. What are the different relations in which man is viewed in the First and Second Books of the Essay on Man ?

7. When was the English East India Company founded, and what were the steps by which, during the 17th and first half of the 18th century, it gradually extended its power ?

8. What other European nations had settlements in India ; and in what manner did the operations of any of them affect Clive, especially in the early part of his career ?

9. Give Macaulay's summing up of Clive's character ; especially with respect to the civil transactions of his Government.

SECOND YEAR STUDENTS.

LOGIC.—*Examiner, Professor Park.*

1. Briefly explain and criticise :—

"The question respecting the validity of an Argument is, not whether the conclusion be *true*, but whether it *follows* from the premises adduced."

"Unclothed as yet in words, or stripped of them, thoughts are but dreams."

- "He who infers, proves; and he who proves, infers."
2. Is Logic "primarily and essentially concerned with thought, and only secondarily and accidentally with language"?
3. "Genus and Species are words which cannot, either of them, be employed without impliedly asserting the existence of the other"?
"Common terms are both denotative and connotative; singular terms are not connotative"?

4. Examine the following definitions:—

"A dispute is an oral controversy, and a controversy is a written dispute."

"The London University is a central institution with its centre everywhere." "Man is an intelligent creature." "Money is coin."

5. Point out the subjects and the predicates of, and designate by the technical symbols:—

"Good wine needs no bush." "Two and two make four."

"Where there is no property there is no injustice."

"No inductive conclusions are more than probable."

"Not to go back is somewhat to advance."

6. Explain and examine:—

"You prove the truth of a proposition by showing that the converse of it is absurd . . . Nothing is demonstrably certain but those things whose converse is manifestly false."

"Though one of the contraries is false, the other may be either false or true."

"Our spontaneous 'some' is always some at most some not all."

7. What are *indirect* moods, *imperfect* moods, *subaltern* moods? What do *s* and *p* final in the mnemonic lines of the syllogism mean? What is *obscissio infiniti*? What is an *Enstasis*?

8. Examine the following inferences, and give their technical names:—

"As non-conformity of the inner to the outer order is want of intelligence, conformity of the inner to the outer order is that in which intelligence consists."

"Nobody complains, therefore nobody suffers."

"Ignorance of forms cannot properly be styled ill-manners; because forms are subject to frequent changes; and, consequently, being not founded upon reason, are beneath a wise man's regard."

"J. S. has taken arsenic, for the application of Marsh's test discovers it; therefore he has been poisoned, and therefore we cannot return a verdict of death from natural causes."

"International law is merely the formal expression of the public opinion of the civilized world respecting the rules of conduct which ought to govern the relations of independent nations, and is, consequently, derived from the source from which all public opinion flows—the moral and intellectual convictions of mankind."

"Some have denied a soul! they never loved."

9. State the nature and the laws of the plurative syllogism.

10. The separate syllogisms in a chain (or coil) of circumstantial evidence, if regarded as syllogisms in the second figure, involve a formal error? We may regard them as in the first figure? How do we estimate the value of circumstantial evidence?

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amination.

11. How is it "possible for us to know objective truths which have never been observed, in virtue of others which have"?

12. With what uniformities of nature has Material Logic to deal? Why is it that the Logic of co-existence is "speedily exhausted"?

13. "The only notion of a cause which the theory of induction requires is such a notion as can be gained from experience"?

14. "Though light is certainly not the only cause of the nutrition of pigment, and perhaps not the chief cause, there is evidence that it is a cause; since pigment grains near the surface commonly increase in size or number or both when much exposed to light."

What *methods* underlie this inference, and which (if any) is inapplicable?

15. "Analogical reasoning is the antipodes of demonstrative reasoning"?

16. What conclusions are deducible from these data:—

"Wealth was thus held to consist in the precious metals, and wealth was power."

"Finished was His holy life; with His life His struggle; with His struggle His work; with His work His redemption! with the redemption the foundation of the new world."

MINERALOGY, GEOLOGY, AND PHYSICAL GEOGRAPHY.—*Examiner, Dr. Cunningham.*

1. Give a short account of the principal ores of Iron.

2. State the crystalline form and chemical composition of the following minerals:—Graphite, Rock Crystal, Aragonite, Corundum, Beryl, Olivine, Dolomite, Talc, Serpentine.

3. State the characters of the following rocks:—Breccia, Dolomite, Trachyte, Porphyry, Amygdaloid, Syenite, Quartzite.

4. Explain the meaning of the following terms:—Anticlinal, synclinal, dip, strike, fault, unconformability, cleavage, foliation. To what agency is the phenomenon of slaty cleavage generally regarded as due?

5. Give a short account of the Miocene strata of the British islands.

6. Mention the names of some of the characteristic fossils of the Bracklesham beds.

7. Give a table of the main subdivisions of the Cretaceous group.

8. What are the principal subdivisions of the Carboniferous strata, as seen in the south-west of England?

9. What is the position and what the character of the Monneian beds? Mention some of the characteristic fossils.

10. Give a short account of the disposition of the plains and deserts of Europe and Asia.

11. Briefly describe the course of the principal cold oceanic currents.

ZOOLOGY.—*Examiner, Dr. Cunningham.*

[First Year Students omit questions 5 and 7, Second Year Students omit questions 1 and 10.]

1. State the principal characters of the class Infusoria.

2. Give a brief description of the structure of the Siphonophorous Hydrozoa.

3. Mention the diagnostic characters of the orders of Platyelminthes.

4. Mention some of the more important characters of the sub-kingdom Arthropoda. Appendix, No. 11.
5. Give a sketch of the more noteworthy modifications of the parts of the mouth in the various groups of insects. General Class Examination.
6. Of how many layers does the blastoderm of the vertebrate ovum consist? Mention the organs developed from each layer.
7. Describe the structure of the skull in Osseous Fishes.
8. Give a short account of the osteology of Amphibias.
9. State the general characters and geographical distribution of Struthioness.
10. Give the characters and distribution of the Pinnipedous Carnivora.

FIRST YEAR STUDENTS.

ENGLISH LAW.—*Examiner, Professor Molynaux.*

LAW OF PROPERTY.

1. What were the difficulties in respect of the due execution of renewals of leases under covenants for perpetual renewal, so as duly to perfect the title of the lessee, which have been removed by the provisions of the "Leasehold Conversion Act?" and what are the two leading provisions which operate in the statutable conversion to perfect the title of the grantee of the fee-farm grant?
2. If intestate die possessed of property, leaving grandfather or grandmother, and uncle or aunt, how is the property to be distributed as between them? State the reason.
3. Upon the death of a mortgagee in fee-simple, upon whom does the mortgage devolve?
4. X dies leaving A, B, and C, executors; A and B die, each leaving executors; C, the survivor, dies intestate; who shall represent X?
5. What alteration in the law respecting lapsed devises has been effected by the Statute of Wills, 1 Vict.?
6. What are emblements? and what is the present mode of realizing them provided for the tenant by the Statute?
7. Lease to A for 20 years, if he shall so long live; lease to A for his life, or for 31 years, whichever shall last longest; of what tenure are these leaseholds respectively?
8. What act was necessary to complete the title of a termor for years at *Common Law*? and what under the Statute of Uses?
9. A and B, joint tenants of a term; A takes a conveyance of the reversion of the same lands; X possessed of a term, the reversion in fee descends upon his wife. What effect is produced in each case? State the reason.
10. Lease to A in possession for 20 years, to commence on its execution. Lease to B of the same lands for 40 years, also to commence from its date. How does the demise to B operate, and what are his rights under it?
11. In investigating titles in *Ireland*, why is a search for the original patent from the Crown necessary in reference to the lands?
12. Grant to A and his heirs, remainder to B and his heirs. How does such assurance operate?
13. What words are essential to create an estate tail in a *deed*?
14. What estate is created by a devise to A and his issue?
15. By what acts *inter vivos* may the right of property in goods be changed?
16. By what act is the property in a bill of Exchange transferred?

SECOND YEAR STUDENTS.

EQUITY AND BANKRUPTCY.

1. What is the true principle and foundation of the jurisdiction as claimed and exercised by Courts of Equity in proceeding by Injunction against parties who have obtained judgments at law?

2. A, being in possession of a hotel, mortgaged the house and furniture to B. The mortgagor continued in possession and became bankrupt. The assignees of the bankrupt claimed an absolute interest in the furniture against the title of the mortgagee. Which of the claimants is entitled, and why?

3. Under what branches of equity jurisdiction do Courts of Equity admit parol evidence as manifesting a different intention on the part of a party to the contract from that appearing on the face of the written document? In what cases will the Court merely set aside the contract? and in what case will it also enforce it with a variation?

4. How does the mode of administering equitable assets of a deceased person, in payment of debts, differ from that in the case of legal assets?

5. In what case is a defence open to a surety in a suit against him by the person assured?

6. What are the cases in which a Court of Equity will decree a specific performance of contract, when there is a misdescription?

7. What evidence is it necessary to produce in support of a suit for specific performance of a contract for the sale of land brought by the vendor against the vendee?

8. When the fee-simple is subject to incumbrances, and the estate is afterwards put in settlement, in what respect does payment of such by a tenant for life differ from that by a tenant in tail, as regards the interests of the person discharging such incumbrances, and the interests of persons entitled in remainder or reversion?

9. Where different debts are due by A to B, and A makes payments from time to time; what is the rule as to the appropriation of such payments as to such debts respectively?

10. What is the leading feature of the last Bankrupt Act, 35 and 36 Vict., chap. 58, as affecting debtors?

11. In what instance do the acts of the bankrupt become void as against his general creditors under the bankruptcy, from the commission of the act of bankruptcy? and in what case does such invalidity date from the filing of the petition of bankruptcy?

12. What effect has bankruptcy upon powers and entails respectively?

THIRD YEAR STUDENTS.

COMMON AND CRIMINAL LAW.

1. Contracts for the purchase of estates in land. How do the relations of the parties differ in the contemplation of Courts of Law and Courts of Equity?

2. What is the direct, and what the indirect, jurisdiction of the Court of Queen's Bench in criminal cases?

3. State some statutable exceptions to the legal maxim "*actio personalis moritur cum persona*."

4. What is the difference between larceny and embezzlement?

5. Guarantee in the following terms:—"I, M. N., on this 1st March, 1875, do guarantee to you the payment for the hay sold by you to F. G., on the 3rd day of February last, if he does not discharge the amount. James Cochran." "To Mr. John Jones."

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amination.

Action brought by Jones against Cochran. Demurrer to the Plaintiff's declaration, which set out the guarantee as above. What would be the judgment?

6. What element is necessary to entitle a reversioner to maintain an action against a wrongdoer for injury to the land in possession of his tenant?

7. What is the limit as to the measure of resistance to an assault, so as to render it justifiable?

8. Sheriff, under an execution, seizes goods alleged to belong to the Defendant. A third person claims the goods. What is his remedy in assertion of his claim, and against whom?

9. A, B, C, and D, trading under the style and firm of A, B, & Co., accept bills of exchange in the name of the firm, drawn by a firm trading under the title of X & Co., then consisting of X, Y, and Z; before the bills fall due, A and X retire from their respective firms. The bills being dishonoured, who are to be parties, Plaintiffs and Defendants, in an action brought to recover the amount?

10. A and B enter into a wager on an approaching prize-fight, A backing G, and B backing S; the amount of the wager is deposited with X, and G conquers; X refuses to pay either. What are the rights of the parties?

11. A becomes indebted to B in £500; A, by his will afterwards, among other bequests, gives B a legacy of £600. X, the executor named in the will, takes out probate, and after the expiration of a year, B brings an action against X, the executor, to recover the debt, and files a bill in equity against him for payment of his legacy. What course is the executor to take? and what are the rights and remedies of all parties, including the residuary legatee?

A executes his bond to B, by which he binds himself and his heirs to pay £500. A dies intestate, seized of real estate, and also of personal property, leaving C his heir-at-law. Has B any remedy at law against C; and what are their respective rights generally?

FOURTH YEAR STUDENTS.

ENGLISH LAW.

1. In the creation of estates or interests by appointment under a power what is the *terminus a quo* to be regarded in estimating remoteness of the limitations?

2. When several offences are charged in the same indictment for felony, in what instances will the prosecutor be put to his election?

3. In what cases can a power be extinguished by the act of the donee? And in what not?

4. What are the two classes of cases in which entries by deceased persons are admissible in evidence?

5. In what respect does an analogy exist between corporations and modern joint-stock companies, in respect of rights of, and parties to actions connected with such? And where does such analogy fail?

6. For what reason are limitations rejected as *cross-remainders* in a deed, which are nevertheless sufficient to raise them in a will?

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amination.

7. In what instance will the title of an assignee of the husband fail, where the subject of the assignment is the wife's chose in action?

8. How do the charge of debts and legacies upon the testator's real estate, and the exoneration of his personal estate from such, respectively operate in the general administration of his assets.

9. In what respect does an arrest by a private person on suspicion of felony differ from that by a constable, as regards their respective responsibility to the person arrested?

10. In what case may a person succeed as heir to another who himself derived by inheritance, although the former was not of the blood of the last purchaser?

11. What is the extent, and what the limit of the rights of a tenant under a terminable lease in relation to minerals and quarries on the farm demised to him?

12. To what tribunal does an appeal lie from the Court of Admiralty in Ireland? And to what tribunal does an appeal lie from the Court of Admiralty in England?

13. Under what circumstances does a tenant for lives renewable for ever forfeit his right of renewal?

14. Four sureties in a bond executed on a loan to A. B.; the principal and two of the sureties become insolvent, and one of the sureties is obliged to discharge the debt, and desires to obtain contribution against the solvent co-surety.

State which would be the most effectual remedy—at law—or in equity: and state the ground of preference.

15. Blackacre conveyed to trustees to the use of A. and the heirs of his body, but if he shall die without issue before he arrive at the age of 23, then to the use of B and his heirs. By the same deed Whiteacre conveyed to trustees to the use of A, and if he die without issue living, X; then to the use of B and his heirs.

A having arrived at the age of 21, suffered recoveries of both denominations, and died without issue before he arrived at the age of 23 years, living X; A's heir at law enters into possession of both denominations, and B brings his ejectment to recover both denominations. Is he entitled to recover?

FIRST YEAR STUDENTS.

JURISPRUDENCE.—*Examiner, Professor Leslie.*

1. Sir H. Maine assigns several causes connected with Law for the superior progress of the Romans, compared with the Hindoos. Explain the operation of each.

2. Explain the connexion between two of the causes referred to in the foregoing question, and their connexion also with the movement from status to contract.

3. What is the difficulty pointed out by Sir H. Maine with respect to the origin of primogeniture? What is his explanation?

4. What is the special difficulty connected with the extension of primogeniture to lands held in socage tenure? What is the explanation?

5. Are there any decisive tests by which a purely archaic legal system may be ascertained to be such?

6. State Austin's definition of Law, and comment on it in reference to archaic law.

7. Trace the connexion between the modern will, and the earliest form of the Roman testament. Appendix, No. 11.
8. Sir H. Maine points out some remarkable differences between Roman and English ideas respecting both wills and succession ab intestato. General Class Examination.
9. Explain the origin of the unlimited power of bequest of personal property in English Law.
10. What Roman elements are supposed to have contributed to the growth of feudalism?
11. Explain Sir H. Maine's statement that the Law of Persons and the Law of Things were once indistinguishably blended.
12. State and criticize Blackstone's division of Rights.

SECOND YEAR STUDENTS.

JURISPRUDENCE AND CIVIL LAW.—*Examiner, Professor Leslie.*

1. What are Austin's objections to the division of Law into public and private? Can you make any answer to these objections?
2. State the divisions of Private Law in Justinian's Institutes, with reference to its historical sources, its forms, and its subjects.
3. State the main divisions of "persons" in Roman Law; and distinguish between *adoptio* and *arrogatio*.
4. Austin's conception of the Law of Persons differs from that which seems to have guided the Roman jurists?
5. State Austin's objection to the order in which the Law of Persons and the Law of Things are placed in Roman Law. How do you account for the Roman order?
6. Explain what is meant by *natural* and *civil* modes of acquiring property, in Roman Law, and give examples.
7. Explain the meaning and state the chief classes of servitudes? Are there any equivalent terms in English Law?
8. Explain the causes of the superiority of Roman over Hindoo civilization, connected with Law.
9. Are there any decisive tests by which a legal system may be known to be purely archaic?
10. Define a *legacy* in English and Roman Law, respectively.
11. What was the *Lex Falcidia*?
12. Give some account of the historical relations of Roman to English Law.

THIRD YEAR STUDENTS.

POLITICAL ECONOMY.—*Examiner, Professor Leslie.*

1. Show how the division of labour tends to the increase of national wealth.
2. What are the constituent elements of gross profit? Trace their operation in the cases of a bill broker, a petty retail dealer, and a wine merchant.
3. How do you account for the existence of land rent? Does it raise prices or not, and why?
4. What are the disadvantages of the absence of money and the conduct of exchanges by barter in primitive society?

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5. State your reasons for agreeing with, or dissenting from, the following proposition laid down by a recent writer:—"A general rise in wages would produce an exactly equivalent effect on prices, and the labourer would be no better off than before."

6. Does the value of money in England depend on the cost of production of gold, or not, and why?

7. In what countries do prices range highest, and why?

8. Explain the causes determining the ordinary amount of money and instruments of credit required to carry on the internal trade of the United Kingdom.

9. If a gold coin were given to every one in the kingdom, would prices rise equally or not, and why?

10. What is meant by an "unfavourable exchange?" To whom is it unfavourable in reality, and why?

11. Could a general rise of prices take place without any addition to coin or diminution of commodities, in a country in which credit was unknown, or not, and why? Could a commercial crisis take place under such circumstances, or not, and why?

12. On whom do the following taxes really fall, and why?—a tax on land rent: a tax on all vehicles of locomotion: a tax on all profits.

FOURTH YEAR STUDENTS.

CONSTITUTIONAL AND INTERNATIONAL LAW.—*Examiner, Professor Leslie.*

1. State and criticize Austin's objections to the division of law into public and private.

2. In what case is "Constitutional Law" partly positive law, and in what case is it positive morality exclusively? Add some explanation of the term.

3. What are, according to Hallam, the two direct guarantees of civil liberty in England?

4. State the main provisions of the 7 William III., c. 3, and 7 Anne, c. 21, respecting treason.

5. State the provision of Magna Charta for the personal liberty of the subject.

6. State the main provisions of the law of Habeas Corpus.

7. Of what branches of International Jurisprudence is the Roman principle of occupancy the root?

8. How is the modern conception of Sovereignty connected with International Law?

9. What are the two general rules laid down by Vattel respecting the impartiality of neutrals towards belligerents?

10. In what cases, if any, may contracts entered into between the subjects of belligerent States give rise to valid claims after a treaty of peace?

11. State the principal modes of redress by forcible means, short of actual war, between States.

12. State the three maxims of Habermas, and his general corollary, relative to Conflict of Laws.

THIRD YEAR STUDENTS.

Appendix,
No 11.ENGLISH LITERATURE.—*Examiner, Professor Yonge, M.A.*General
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amination.

1. To what extent did Shakespeare consider himself bound to adhere to historical truth in his historical dramas? Illustrate your answer by reference to those dramas; and more especially by reference to *Macbeth* or *Julius Caesar*.

2. Give an account of the plot of *Macbeth*, or of *Hamlet*, with a criticism on the dramatic talent of the poet, as shown in the manner in which he works out the plot to the final catastrophe.

3. Write notes on the following passages:—

I must report they were
As cannons overcharged with double cracks.

Bellona's bridegroom lapped in proof.
I' the shipman's card.

The golden round
Which fate and metaphysical aid doth seem
To have thee crown'd withal.

Pity . . . horsed
Upon the sightless couriers of the air.

Or on these:

Thou art a scholar, speak to it, Horatio,
Season your admiration for a while
With an attent ear.

Unhousel'd, disappointed, unanel'd.

And, Give an analysis of *Hamlet's* speech in Act 3, Scene 1, beginning
To be, or not to be.

4. Give an account of Pope's argument in the first book of the *Essay on Man*.

Or,

Describe the characters of *Moloch*, *Beelzebub*, and *Belial*, as portrayed in *Paradise Lost*.

5. What is Byron's view of the character of *Napoleon Buonaparte*, as given in *Cantos III., IV.*, of *Childe Harold*?

Or,

Under what names does *Dryden*, in *Absalom* and *Achitophel*, portray the Duke of Monmouth, the Duke of Buckingham, Lord Shaftesbury? Quote any of the passages relating to these three men that you can remember.

6. Write notes on the following passages:—

In Santa Croce's sacred precinct's lie
Ashes that make it holier.

Lausanne and Ferney.

The spouseless Adriatic mourns her lord.

The Niobe of nations.

Or,

For such antiquity had taught
Was preface meet, ere yet abroad
The cross of fire should take its road.

The Commoner King, King James.

A grey-haired sire whose eye intent
Was on the visioned future bent.

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amination.

7. Give the substance of Johnson's comparison between Dryden and Pope, with your own comments and estimate of the justice of the comparison.

Or,

Describe the position and condition of the British possessions in India at the time when Clive arrived in that country.

8. What are the principal remarks which Burke, in his *Reflections on the Revolution in France*, makes on the English Revolution of 1688; and especially of the principles and objects kept in view in the Declaration of Right?

What does he say of "the moral lessons we might draw from history?"

Or,

In what year was the pamphlet entitled "*Thoughts on the present Discontents*" written; and to what causes does Burke principally attribute those discontents?

By what arguments does Burke principally seek to recommend the adoption of Conciliatory measures towards the British Colonists in America; and what were the measures which he chiefly recommended?

SUBJECT FOR ESSAY.

English Literature as compared with that of the Greeks and Romans; or with that of some modern nation, as the French; with special reference to Dramatists, Historians, and general poets.

THIRD YEAR STUDENTS.

MODERN HISTORY.—*Examiner, Professor Yonge, M.A.*

1. What was the case of Lord Middlesex in the reign of James I.? How did it bear on any important event in the reign of Charles I.?
2. Give an account of the principal actions of the Duke of Buckingham after the accession of Charles I.
3. What were the abuses chiefly complained of in the Petition of Right?
4. What were the treaties of Dover, Ryswick, The Hague, Aix-la-Chapelle, Paris, Amiens?
5. Give an account of the administration, and describe the character of Sir Robert Walpole.
6. Who were the principal commanders on both sides at, and what were the results of, the battles of Marston Moor, Neerwinden, Killiecrankie, Newton Butler, Malaga, Oudenardo, Sheriffmuir, Dettingen, Plassey, Bunker's Hill, Trafalgar, Salamanca?
7. What were the causes of the war which broke out between England and Spain in 1739? Examine their importance.
8. Trace the relationship between her present Majesty and Robert Bruce.

1. Give an account of the States General: the constitution, the powers, and the history of that body in the 17th and 18th centuries.
2. Give an account of the French Parliament; and especially relate the chief incidents in its history in the time of Mazarin; of Fleury; of Maupeou; and in the years 1786-9.
3. What were the doctrines of Quesnay, and Gournai?
4. Under what circumstances did France acquire the provinces of

Alsace and Lorraine; and the fortresses of Valenciennes; Strashurg; and Sedan? Appendix,
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5. Who were the French commanders in the battles of Rocroi; Nordlingen; Senef; Roshach; Marsaglia; Hohenlinden; Maida; Orthes; Leipsic; and what were the results of these different battles? General
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amination.

6. What were the principles which Turgot sought to establish in the political reforms which he proposed in 1775.

7. What was the constitution of the Directory; and of the Consulate?

8. What were the treaties of Niméguen; Campo Formio; Luneville; Presburg; Vienna; Reichenbach?

9. Compare the concessions announced by Louis XVI. to the States General in May and June, 1789, with the Charter granted by Louis XVIII. on the downfall of Napoleon.

10. Mention any remarkable resemblance between incidents in the English Rebellion against Charles I. and others which marked the progress of the French nation.

Or,

1. Give an account of the case of Arabella Stuart.

2. Give an account of the principal proceedings of the Short Parliament; and of the Long Parliament till March, 1642.

3. Who were the members of the Cabal; and what were the principal objects of their policy?

4. What was the object of the Triple Alliance, and how far did it succeed?

5. Describe the Septennial Bill, the Triennial Bill, and the Peerage Bill.

6. Enumerate the first 8 Prime Ministers of the reign of George III.

7. State the circumstances which led to the repeal of Poyning's Act.

ANATOMY AND PHYSIOLOGY.—*Examiner, Dr. Redfern.*

[First Year Students are required to answer questions 1, 2, 3, 4, 5; Second Year, 3, 4, 6, 7, 8; and Third and Fourth, 3, 7, 8, 9, 10.]

1. Describe the various forms of epithelium and state where each is to be found.

2. Give an account of the muscular sense and its uses.

3. State the relations of chyle, lymph, and blood to each other, and describe their differential characters.

4. Describe the development of bone in cartilage and membrane.

5. Give an account of the muscular actions of the various parts of the alimentary canal, from the mouth onwards.

6. Describe the structure and functions of the iris.

7. Trace the tubes of the kidney from their commencement, and describe their structure at different parts.

8. Describe the circumstances which influence the exhalation of carbonic acid in respiration, and the ordinary conditions for its free elimination.

9. Give a short account of the anatomy and physiology of the thyroid body.

10. Describe the various modes of ending of sensory nerves.

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amination.

PRACTICAL ANATOMY.—*Examiner, Dr. Redfern.*

[In addition to making a dissection, First Year Students are required to answer questions 1, 2, 3, 4, 5; Second Year, 2, 3, 6, 7, 8; and Third and Fourth Year, 6, 8, 9, 10, 11.]

1. Describe the shape, position, and articulations of the parts of the bones composing the orbit.
2. Give an account of the ligaments and articulatory arrangements of the astragalus.
3. State the connexions of the tendons about the knee joint; and describe the relations of tendons with the synovial membrane of that joint.
4. Describe the nerves of the various muscles of the gluteal region, and specify the course and place of entrance of each nerve into its muscle.
5. Give an account of the course and branches of the external carotid artery.
6. Describe the inguinal and femoral canals, their boundaries and relations.
7. Trace the small sac of peritoneum, and specify the extent of each part it covers, and where it comes into relation with the peritoneum of the great sac.
8. Describe the vessels and nerves which supply the tissue of the heart.
9. Describe the cavernous sinus and the parts contained in its wall.
10. Trace the course, relations and distribution of the nerves of the tongue.
11. Describe the cervical ganglia of the sympathetic nerve and their branches.

MATERIA MEDICA.—*Examiner, Dr. J. Seaton Reid.*

1. State, in the order of sequence, the proofs in support of the opinion, that medicines are absorbed before they act on remote parts.
2. What fact is relied on by the supporters of the Nervous theory, that medicines need not be absorbed; and how would you controvert it?
3. Name the preparations called "Glycerines" in the Pharmacopoeia, state their ingredients, and the therapeutic properties of each.
4. How much opium is in a scruple of the Pulv. Kino Compositus; Pulv. Cretæ, Compositus Aromat. c. opio; Pulv. Ipecac. Comp.?
5. State the respective neutralizing power of acid, possessed by Carb. of Lithia, Carb. of Ammonia, Sodæ, and Potassæ.
6. State the proportions of alkali to a pint in Liq. Lithiæ, Sodæ, and Potassæ, Effervescens.
7. How would you distinguish Salicine from Quinine?
8. In what disease of early life has Succus Conii been found efficient?
9. Write a prescription for its use by a child seven years old.
10. Name the medicines on the table, and classify them therapeutically.

FRENCH.—MEDICAL STUDENTS.—*Examiner, Professor Meisner.*

Translate into French:

- I. Have you a mind to take a long walk? Do you know what his aunt died of? Where are your sisters and his? Have you paid your tailor and mine? Is Robert taller than you are? Whom will they reward? Did your servant rise before me? Have you met nobody in the orchard this morning? Where are you

going to put this gold and this silver? Do you know these children? Are there any beautiful flowers in your garden?

II. We shall not sing this evening. We had finished our translation when you came in. Sit down, if you please. Pray put on your hat. It is very cold to-day. Stand upright. It will be so, whether you like it or not. He will see no one. It is going to strike six o'clock. Honest people keep what they promise. They owed him fifty francs. There are people who amass riches with as much eagerness, as if they were to live for ever. Never speak ill of your neighbour. Tell him to go away. If you would read louder, we should hear you better. You would do well, I think, to conclude this bargain. Do not consider him your friend who approves all you say and all you do.

Translate into English :

III. L'empire Romain semblait alors couvrir la terre de sa puissance ; mais ses révolutions perpétuelles, ses guerres civiles, le changement de ses princes, la dévastation de ses provinces, tout annonçait sa ruine prochaine. Ce peuple colosse, semblable à un rocher contre lequel viennent se briser les flots d'une mer agitée avait résisté longtemps et repoussé, par la discipline de ses légions, les hordes de barbares, qui, séduits par ses richesses, avaient jusqu'alors vainement essayé de l'entamer ; mais, son règne était passé et à la force de l'âge viril commençait à succéder une vieillesse agitée. Déjà Constantin avait ébranlé son empire, il hâta sa révolution en renversant de sages principes qu'il eût dû respecter. Ses successeurs, élevés dans la mollesse et dans la débauche, avilirent le pouvoir, en abandonnant à de vils eunuques l'art important et difficile de régner. Les gouverneurs des provinces gauloises, avides de richesses, et sûrs de l'impunité, ne respectèrent rien.—J. B. B. ROQUEFORT.

FIRST YEAR STUDENTS.

GREEK.—*Examiner, Professor MacDonall.*

I.—Translate accurately the following extract from the *Cyropaideia* of XENOPHON :—

ὁ δὲ Κῆρος, εἰ δέοντο αὐτοῦ οἱ παῖδες, διὰ τὴν φιλευθροπρίαν καὶ φιλοτιμίαν περὶ πάντας ἐπειρεῖτο διαπράττειν. καὶ ὁ Ἀστυάγης ὅ τι δέοντο αὐτοῦ ὁ Κῆρος οὐδὲν ἰδύνατο ἀντίχειν μὴ οὐ χαρίζεσθαι. καὶ γὰρ ἀσθενήσαντος αὐτοῦ οὐδὲ ποτε ἀπέλυσε τὸν πάππον οὐδὲ κλαίων ποτὶ ἱπασίαν, ἀλλὰ δῖλος ἦν πᾶσιν ὅτι ἡκραβεβόλοιο μὴ οἱ ὁ πάππος ἀπεθάνῃ καὶ γὰρ ἐκ νεότητος, εἰ τινας οἶστο Ἀστυάγης, πρῶτος γινώσκοντο Κῆρος καὶ πάντων ἀκονότατος ἀντιπῆδα ὑπερεθέσαντο ὅ τι οἶστο χαρίζεσθαι ὥστε παντάπασιν ἀνικῆσθαι τὸν Ἀστυάγην. καὶ ἦν μὲν ἴσως πολυλογώτερος, ἀρα μὲν διὰ τὴν παιδείαν, ὅτι ἡναγκάζετο ὑπὲρ τοῦ δολασκάλου καὶ διδόναι λόγον ὧν ἐποίει καὶ λαμβάνειν παρ' ἄλλων ὅποτε δικάζει, ἐπὶ δὲ καὶ διὰ τὴν φιλομαθήειαν εἶναι πολλά μιν αὐτὸς αἰετὶ τοῖς παρόντας ἀνηρώτα πῶς ἔχοντα ἐγγράμους, καὶ οὐ αὐτὸς ἐπ' ἄλλων ἱρωτέρος διὰ τὸ ἀγγίξουσιν εἶναι ταχὺ ἀπερίνευτο. ὥστε ἐκ πάντων ταύτων ἡ πολυλογία συνελέγετο αὐτῷ· ἀλλ', ὥσπερ ἐν σώματι, οὐκ οἶος ὅστις μέγεθος διαβῶν, ὅμως ἡμφαίνεται τὸ νεαρὸν αὐτοῖς ὅ ὁ κατηγορεῖ τὴν διλογίαν, οὕτω καὶ Κῆρος ἐκ τῆς πολυλογίας οὐ θράσος διαφαίνεται· ἀλλ' ἀπλότης τις καὶ φιλοσπεργία ὥστ' ἐκτεθῆναι εἰς τὴν πλείω αὐτοῦ ἀεσθῆν ἢ σωπῶντι παρῆναι. * * καὶ γὰρ οὐκ ἀεὶ γινώσκονται πολλάκις ἡλικίαι πρὸς ἀλλήλους, οὐχ ἂν ἐρεῖταιν ζῆναι ὡς ταῦτα πρὸς αὐτοὺς τοῖς συνόντας, ἀλλ' ἂν πρὸς τὸ ζῆναι ἑαυτοὺς ὥστε ταῦτα εἰρηχὲ φάσκοντα ἄλλων ἀνδρῶν ποιήσαν, καὶ κατήρχον ἥδη ἀνακηδῶν ἐπὶ τοῖς πῶτος ἢ διαταξιεύσοντας ἢ διακοσμιούμενος ἀπὸ τῶν ἱππων οὕτω παννύχιος ὡς, ἡγνῶμενος ὅτι αὐτὸς ἐπ'

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ἐκαστὴ μάλιστα ἑξ ἑαυτοῦ. ὥς δ' ἐκἀπεδιδρασκεῖς ἐκ τοῦ ἡττῆσθαι εἰς τὸ μὴ ποιεῖν ἢ ἡττῆσθαι,¹⁷ ἀλλ' ἐκἀποδείκνυται ἐν τῷ παρῆσθαι αἰθέρι βδελύσσον ποιεῖν, ταχὺ μὲν εἰς τὸ ἵππιν ἀρίστεον τῷ ἵππικῷ τοῖς θλίψε, ταχὺ δὲ παρῆται διὰ τὸ ἡρᾶν¹⁸ τοῦ¹⁹ ἔργου.²⁰

II.—1. Parse accurately and fully every word to which the figure 1 is attached.

2. Derive or decompose every word to which the figure 2 is attached.

3—18. Explain the syntax of every word or group of words thus numbered, giving special heed to μὴ οὐ χαρίζεσθαι, διὰ τὸ φιλομαθῆς (or ἀγχινοῦς) εἶναι, κρείττων ᾗδε ὢν and ᾗδε ταυτὸν κρείττον' ὄντα, and to every verb in the subjunctive passing or past.

SECOND YEAR STUDENTS.

I.—Translate perspicuously the following extract from XENOPHON'S *Memoirs of Socrates*:—

Τίνας ὑπὸ τίνων ἐβροίμην ἂν μείζονα ἀεργετημένους* ἢ παῖδας ὑπὸ γυναικῶν; εὐερίαι γυνεὶς ἐκ μὲν οὐκ ὄντων ἐποιήσαν εἶναι τοιαῦτα διὰ καλὰ ἰδέειν καὶ τοσούτων ἀγαθῶν μετασχῆναι ὅσα εἰ θεοὶ παρήκουσι τοῖς ἀνθρώποις, ἃ δὲ καὶ οὕτως ἡμῖν δοκεῖ πάντες εἶναι ὡςτις πάντες τὸ καταλείπειν αὐτὰ πάντων μάλιστα φεύγοντες. καὶ αἱ παῖδες ἐπὶ τοῖς μεγίστοις ἀδικήμασι ζημίαν θάνατον πεποιήσαν, ὥς οὐκ ἂν μείζονας ἐκὸς φέβω τὴν ἀδικίαν ποιοῦντες. καὶ μὴν οὐ τῶν γε ἀποδείκνυται* ἵνα παιδοποιεῖσθαι τοῖς ἀνθρώποις ἐπιλαμβάνουσιν, ἐπεὶ τοῦτον γε τῶν ἀπολαύσεων μιστοὶ μὲν αἱ ὀδοὶ μιστὰ δὲ τὰ οὐκ ἐκείνη. φανεροὶ δ' ἱερὰ καὶ σκοπούμενοι ἐξ ὁποῦν ἂν γυναικῶν βδελύσσοντα ἡμῖν τίκα γίνεσθαι, αἷς σπασθῶντες τινοποιεῖσθαι.* καὶ ὁ μὲν γε ἀνὴρ τὴν τε συντακτικὴν ἐποίησαν ταυτὴν τρέφει καὶ τοῖς μὴλλοις ἐκείνην ποιεῖ προσπαρεσκεψάμενος πάντα ὅσα ἂν εἴηται συνίστηναι* αὐτοῖς πρὸς τὴν βίαν, καὶ ταῦτα ὥς ἂν δύνῃται πλείστα. ἢ δὲ γυνὴ ὑπεδεξάμενη τε εἶμαι τὸ φοβεῖται* τοῦτον, βαρυνόμενη τε καὶ ἀνδραποδίσκου κατὰ τοῦ βίου καὶ μεταδιδόσθαι* τῆς τροφῆς ᾗ καὶ αὐτὴ τρέφεται, καὶ σὺν πολλῇ πόνῳ διωλύσασθαι* καὶ τοκοῖς τρέφει τε καὶ ἐπιμελεῖται, οὔτε προπεπονθῆναι* οὐδὲν ἀγαθὸν οὔτε γινώσκον τὸ βριφέος ἢ ὅτου* εὐ πάσχει οὔτε σημαίνει δυνάμενον ὅτου εἶναι,* ἀλλ' αὐτὴ στοχαζομένη* τὰ τε συμφέροντα καὶ τὰ ἐκχαριζόμενα* περᾶται ἐκπληροῦν,* καὶ τρέφει πολὺν χρόνον καὶ ἡμέρας καὶ νυκτὸς ὑπερμένοντα ποιεῖν, οὐκ εἰδῶτα* τίνα τοῦτων χρεὶν ἀπολήψεται. καὶ οὐκ ἀρετὰ θρέφει* μένον, ἀλλὰ καὶ, ἰπιδὴν ἐξέως ἱκανοὶ εἶναι οἱ παῖδες μανθάνειν τι, ἃ μὲν ἂν αὐτοὶ ἔχουσιν οἱ γυνεὶς ἀγαθὰ πρὸς τὴν βίαν διδάσκουσιν, ἃ δ' ἂν οἴωνται ἄλλον ἱκανώτερον εἶναι διδάξαι, πέμπουσιν πρὸς τοῦτον λαπαυνάτας,* καὶ ἐπιμελοῦνται* πάντα ποιῶντες ὅπως ἂν εἰ παῖδες αὐτοῖς γίνωνται ὥς δυνατὸν βδελύσσοντα.

II.—Parse fully and accurately every word to which an asterisk (*) is attached, and give the derivation or composition of each.

2. Explain the construction of ἐπὶ ἀδικήμασι ζημίαν θάνατον πεποιήσαν.

3. Explain the use of ἂν in these phrases: (a) πάντα ὅσα ἂν οὔρηται συνίστηναι, ὥς ἂν δύνῃται πλείστα, ἃ ἂν οἴωνται ἄλλον ἱκανώτερον εἶναι διδάξαι,—(b) σκοπούμενοι ἐξ ὁποῦν ἂν γίνεσθαι,—and (c) ὥς οὐκ ἂν πάντες, in connexion with which you will discuss the variant readings παῖσαντες and παῖσσοντες, and likewise supply the ellipsis after ὥς.

4. Express in Latin γινώσκον ἢ ὅτου εὐ πάσχει and οὐκ εἰδῶτα τίνα τοῦτων χρεὶν ἀπολήψεται.

5. Elucidate the change of construction in οὔτε προπεπονθῆναι οὔτε γινώσκον τὸ βριφέος οὔτε δυνάμενον.

I.—Translate perspicuously these extracts from the last Book of the *Odyssey* :—

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amination.

1.—'Ερμῆς δὲ ψυχὰς Κυλλήνιος ἱκεταλῶτο
ἀνδρῶν μνηστήρων· ἔχει δὲ ῥάβδον μετὰ χερσὶν
καλὴν χρυσεῖαν, τῇ τ' ἀνδρῶν ὄμματα θέλγει
ὡν ἐθέλει, τοὺς δ' αἶψι καὶ θανάωντας ἱγίρει.
τῇ ῥ' ἄγε κινήσας· ταὶ δὲ τρίζουσαι ἔπουντο.
ὥς δ' ὅτε νυκτερίδης μοχλῷ ἄντρον θισπεσίῳ
τρίζουσαι ποτίονται, ἐπὶ αἱ τὴν ἀποτίσσειν
ὀρμασθεὶς ἐκ πίττης, ἀνὰ τ' ἀλλήλησιν ἔχονται,
ὥς αἱ τετριγυῖαι ἅρ' ἦσαν· ἤρχε δ' ἄρα σφὲν
Ἑρμείας ἀράκητα κατ' εὐρώοντα κίλευθα.
πᾶρ δ' ἴσαν Ὀδυσσεύς τε ῥόδης καὶ Λαοκάδης πίττην,
ἥβη παρ' Ἑλλήσιοι πύλας καὶ δῆμον Ὀνείρων
ἦσαν· αἴψα δ' ἔκοντο κατ' ἀσφοδὸλον λιμνῶσα,
ἐνθα τε ναίουσι ψυχὰς εἰδωλὰ καρέντων.

οἱ μὲν ἔκαστα δέμοντι θεῶς κίον, αὐτὰρ Ὀδυσσεὺς
ἄσσαν ἐν πολυκάρπῳ ἀλωῇ περιτρίζων.
οὐδ' εἶπεν Δολίσιον, μέγαν ὄρχατον ἱκαταβαίνων,
οὐδέ τινα δμῶων οὐδ' υἱῶν· ἄλλ' ἄρα τοίγῃ
αἰμασιὰς λήκοντες ἀλγῆς ἔμμεναι ἔρχες
ῥέχοντ'· αὐτὰρ ὁ τοῖσι γέρον δόδον ἤγγιμόνισεν.
τὸν δ' εἰον πατὴρ' εἶπεν ἐκτεμνὴν ἐν ἀλωῇ
λίστρῶντα φυτὸν· βνπόοντα δὲ ἴστο χιτῶνα,
ῥαπτὸν ἀικέλιον· περὶ δὲ κήρυγι βοείας
κνημῖδας ῥαπτὰς δέδετο, γραπτῆς ἀμείνωσι,
χειρὶδὰς τ' ἐπὶ χερσὶ βάτων ἔνεκ'· αὐτὰρ ἐπερθεῖν
αἰγίην κυνίην κεφαλῇ ἔχει πύσθος αἰξων.

ὥς φάτο· τὸν δ' ἄχρεος νεφέλῃ ἐκάλυψε μέλαινα,
ἀμφοτέρωσι δὲ χερσὶν ἑλὼν κόων αἰθαλόεσσαν
γεῦσθαι κακισφαλῆς παλῆς ἀδινά στυγαλίζων.
τοῦ δ' ὤριετο θυμὸς, ἀνὰ ῥένας δὲ αἱ ἤδη
δραμὴ μένος προΐττης φίλον πατὴρ' ἀσσεύοντι.
κόσσε δὲ μιν περιφῶς ἐπιδλμινος ἥβη προσκίδα.
"αἰνέας μὲν τοι δὲ αὐτὸς ἰγώ, πάτερ, θν σὲ μεταλλῆς,
ῥλθον ἱεροστοφῇ ἐπὶ πρὸς πατρίδα γαῖαν.
ἀλλ' ἔσχευ εὐλαυθμοῖο γόαιό τε δακρυδέντορος.
ἐκ γὰρ τοι ἰρέω—μᾶλα δὲ χρὴ στυγίμην ἔμπτῃ—
μνηστῆρας κατέπτερον ἐν ἡμετέροισι δόροισιν
λάβην τινέμενος θυμολγία καὶ κακὰ ἔργα."

II.—1. You may annex brief annotations on words or phrases which are rare or difficult.

2. Discuss the genuineness of the three portions of this Book and their relations to each other and to the contents of previous Books.

FIRST YEAR STUDENTS.

LATIN.—Examiner, Professor Nesbitt.

Translate :—

1. Ad id dati dnces Galli edocent, inde milis quinque et viginti ferme supra parvas insulae circumfusum annem latiore, ubi dividebatur, coque minus alto alveo transitam ostendere. ibi raptim caesa materia

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ratesque fabricatae, in quibus equi virique et alia onera traherentur. Hispani sine ulla mole in utres vestimentis coniectis ipsi castris superpositis incubantes flumen tranavere. et alius exercitus rotibus iunctis traiectus, castris prope flumen positis, nocturno itinere atque operis labore fessis quiete unius diei reficitur, intento duco ad consilium opportune exsequendum. postero die profecti ex loco *prodito fumo significant transisse et haud procul abesse. quod ubi acceperit Hannibal, ne tempori decasset, dat signum ad traiciendum. iam paratas aptatasque habebat pedes lintres. teques fere propter equos nantes navium agmen ad excipiendum adversi impetum fluminis parte superiore transmittens tranquillitatem infra traicientibus lintribus praebebat. equorum pars magna nantes loris a puppibus trahebantur praeter eos, quos instratos frenatosque, ut extemplo egresso in ripam equi usui essent, imposuerant in naves.

(a) Give Madvig's readings for (1) "prodito fumo," (2) "propter equos nantes navium, etc."

(b) Explain the constructions "insulae—circumfusum," "ad consilium exsequendum," "pars magna nantes," "ut equi usui essent."

2. Ibi Hannibal castra habebat, revocatoque prope Maharbale atque equitibus, cum instare certamen cerneret, nihil unquam satis dictum praemonitumque ad cohortandos milites ratus, vocatis ad contionem certa praemia pronuntiat, in quorum spem pugnarent: agrum sese datum esse in Italia Africa Hispania, ubi quisque velit, immuneque ipsi qui acceperint liberisque; qui pecuniam quam agrum maluisset, ei se argento satisfactorum; qui sociorum cives Carthaginenses fieri vellent, potestatem facturum; qui domos redire mallerent, datum se operam, ne cuius suorum popularium mutatum secum fortissima esso vellent. Servis quoque dominos prosecutus libertatem proponit, hincque pro his mancipia dominis se redditurum. eaque ut rata scirent fore, agrum laeva manu dextera silicem retinens, si falleret, Iovum ceterisque precatus deos, ita se mactarent, quem ad modum ipse agrum mactasset, et secundum precationem caput pecudis saxo elisit. tam vero omnes, velut deis auctoribus in spem suam quisque acceptis, id munus quod nondum pugnarent ad potiunda sperata rati, proelium uno animo et voce una poscent.

(a) Write short notes on "mutatum secum," "deis in spem suam quisque acceptis," "ad potiunda sperata."

3. Nam in ceteris rebus, cum venit calamitas, tum detrimentum accipitur; at in vectigalibus non solum adventus mali, sed etiam metas ipse adfert calamitatem. Nam cum hostium copiae non longe absint, etiam si irruptio nulla facta est, tamen pecua relinquuntur, agricultura deseritur, mercatorum navigatio conquiescit. Ita neque ex portu neque ex decumis neque ex scriptura vectigal conservari potest: qua re saepe totius anni fructus uno rumore periculi atque uno belli terrore amittitur. Quo tandem igitur animo esse existimatis aut eos, qui vectigalia nobis pensant, aut eos, qui exercent atque exigunt, cum duo reges cum maximis copiis propter adsint? cum una excursio equitatus pertrevi tempore totius anni vectigal auferre possit? cum publicani familias maximas, quas in salinis habent, quas in agris, quas in portubus atque cutodiis, magno periculo se habere arbitrentur?

(a) Write short notes on "pecua," on "propter adsint," and on "salinis."

* *cf.* praefecto.

† *cf.* equites.

- (b) What is the difference between "exercent" and "exigunt" ?
 (c) Explain accurately all the terms relating to the revenue.

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 amination.

Pasa.

4. Translate into Latin Prose:

Porsena, King of the Etruscans, came to Rome with a hostile army to restore the Tarquins. He took Janiculum at the first assault. At no previous time did such terror seize the Romans: they remove from the country into the city: the city they secure with a strong garrison. One part of the city seemed protected by its walls, the other part by the Tiber. The Sublician bridge was near giving a passage to the enemy [and it would have given one], had it not been for a man named Horatius Codes—he had received the name Codes, because he had lost an eye in another battle. Having seized the extremity of the bridge, he alone sustained the whole force of the enemy, till the bridge was broken down behind him. His audacity confounded the enemy; when the bridge was broken up, he sprang into the Tiber, and, while many missiles fell upon him, swam across to his countrymen. The State was grateful to such valour; so much land was given him as could be ploughed round in a day. A statue also was set up to him in the Comitium.

Honors.

As soon as news was brought that the troops were coming, the Emperor went out of the city to meet them, and having mounted a throne which had been placed outside the gates, delivered a short speech to the soldiers. He said that they knew what his own feelings were towards those who had fought in his cause, and whose labours he himself had shared; and that, while he lived, the honour which they had deserved would be theirs; but he asked them to remember that his life was uncertain, and to obey another ruler, whoever he might be, as faithfully as they had obeyed him, for their own and their country's sake. Let them be faithful to their country; let them put *her* welfare above the interests of any party or leader whatever, so as not to bring on their fellow citizens the miseries of civil war. Then, after thanking them for their victories, he descended from his throne, and rode through the ranks to inspect the whole army, and to bestow a few words of praise on those legions and officers who had been most distinguished in the late war.

Additional for Honors.

Translate, with short notes where you think it necessary:—

1. Cedo dum, enunquam iniuriarum audisti mihi scriptam dicam ?
 GR. Qui istuc? PH. Quia non rete accipitri tennitur neque miluo,
 Qui male faciunt nobis: illis qui nil faciunt tennitur,
 Quia enim in illis fructus est, in illis opera luditur.
 Aliis aliunde est periculum, unde aliquid abradi potest:
 Mihi sciunt nil esse. dices "ducent damnatum domum:"
 Alere nolunt hominem edacem, et sapiunt mea sententia,
 Pro maleficio si beneficium summum nolunt reddere.
 GR. Non pote satis pro merito ab illo tibi referri gratis.
 PH. Immo enim nemo satis pro merito gratiam regi refert,
 Tene assumbulum venire unctum atque laetum e balneis,

Otiosum ab animo, quom ille et cura et sumptu absumentur!
Dum tibi sit quod placeat, ille ringitur: tu ridens,
Prior bibas, prior decumbas: cœna dubia adponitur.

2. AN. Ei,
Metuo lenonem nequid GE. Suo suat capiti? idem ego
ureor.
PH. Non iam mihi credis? DO. Hariolaro. PH. Sin fidem do?
DO. Fabulae.
PH. Faeneratum istuc beneficium pulchre tibi dices. DO. Logi.
PH. Crede mihi, gaudelis facto: verum herelo hoc est. DO.
Somnia.
PH. Experire: non est longum. DO. Cantilenam eandem cania.
PH. Tu cognatus, tu parens, tu amicus, tu. . . . DO. Garri modo.
PH. Adeo ingenio esse duro te atque inexorabili,
Vt neque misericordia neque precibus molliiri queas!
DO. Adeo te esse incogitantem atque impudentem, Phœdria,
Vt phaleratis dictis ducas me et meam duces gratias!
3. Pater ipse colendi
Haud facilem esse viam voluit, primusque per artem
Movit agros, curis acuens mortalia corda,
Nec torpere gravi passus sua regna veterno.
Ante Iovem nulli subigebant arva coloni;
Ne signare quidem aut pariri limite campum
Fas erat: in medium quærebant ipsaque tellus
Omnia liberius, nullo poscente, ferebat.
Ille malum virus serpentibus addidit atris,
Prædareque lupos inasit, pontumque moveri,
Mellaque decussit foliis, ignemque removit,
Et passim rivis currentia vina repressit:
Ut varias usus meditando extunderet artes
Paullatim, et sulcis frumenti quæreret herbam,
Ut silicis venis abstrusum exenderet ignem.
4. Nee erit ulterius, quod nostris moribus addit
Posteritas; eadem cupient facientque minores,
Omne in præcipiti vitium stetit! Utero velis,
Totos pande sinus, dicas hic forsitan—"Unde
Ingenium par materiae? unde illa priorum
Scribendi quodcumque animo flagrante liberet
Simplicitas, cuius non audeo dicere nomen?
Quid refert dictis ignoscat Mucius, an non
Pone Tigellium: tæda lucebis in illa,
Qua stantes ardent, qui fixo gutturo fumant,
Et latum media sulcum deducis arena."
Qui dedit ergo tribus patris aconita, vehatur
Pensilibus plumis, atque illinc despiciet nos!
Cum veniet contra, digito compece labellum:
Accusator erit, qui verbum dixerit "hic est."
5. Unde igitur tot
Quintilianus habet saltus? exempla novorum
Fatorum transi: felix et pulcher et acer;
Felix et sapiens et nobilis et generosus
Appositam nigrae lunam subtextit alutæ;
Felix orator quoque maximus et iaculator;

Et, si perfrixit, cantat bene. Distat enim, quas
Sidera te excipiant modo primos incipientem
Edere vagitus et adhuc a matre rubentem.
Si Fortuna volet, fies de rhetore consul;
Si volet haec eadem, fies de consule rhetor.
Ventidius quid enim? quid Tullius? anne aliud quam
Sidus et occulti miranda potentia fati?
Servis regna dabunt, captivis fata triumphos.

6. Translate and explain :

- (a) Ego te cognatum dicam et tibi scribam dicam.
(b) Aliquid convassassem atque hinc me conicerem protinam in pedes.
(c) Nequeo exorare ut me maneat, et cum illo ut mutet fidem.
(d) Unde ego nunc tam subito huic argentam
inveniam miser,
Quoi minus nilo est, quod, hic si pote fuisset exorari
Triduum hoc, promissum fuerat?
(e) Ergo inter sese paribus concurrere telis
Romanas acies iterum videre Philippi;
Nec fuit indignum superis, his sanguine nostro
Æmæthiam et latos Hæmi pinguescere campos.
(f) Transi
Gymnasia atque audi facinus majoris abollæ.
(g) Quis gener hic placuit censu minor atque puellæ Sarcinulis
impar?
(h) Vis certe pila, cohortes,
Egregios equites, et castra domestica.
(i) Mergit longa et insignis honorum
Pagina.

7. Explain the following words and phrases (mark doubtful quantities): ubi initiabunt, tostrina, faxo, nimium quantum, vorsura solves, protelo, ego plectar pendens, satin illi di sunt propitii? qui illum di perduint, commissa auctio, opici mures, stilaria purpura.

8. Give a brief sketch of Latin Comedy down to the time of Terence.

9. To what class of literary composition do the plays of Terence belong? From what author has he chiefly borrowed? Mention the sources of the *Phormio*.

10. To what purpose does Terence devote his prologues? State the points in the literary execution of his plays which were the subject of hostile criticism.

SECOND YEAR STUDENTS.

Translate :—

1. Certiorem te per litteras scribis esse factum me cum Caesare et cum Appio esse in gratia, teque id non reprehendere adscribis. Vatinius autem scire te velle ostendis quibus rebus adductus defenderim et laudarem. Quod tibi ut planius exponam, altius paullo rationem consiliorum meorum repetam necesse est. Ego me, Lentule, initio rerum atque actionum tuarum non solum meis, sed etiam rei publicæ restitutum putabam et, quoniam tibi incredibilem quandam amorem et

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omnia in te ipsum summa ac singularia studia deberem, rei publicae, quae te in me restituendo multum adiuvisset, cum certe meo animo merito ipsius debere arbitraber, quem antea tantum modo communi officio civium, non alicui erga me singulari beneficio debitam praestitsem.

2. Dux nobis et auctor opus est et eorum ventorum, quos proposui, moderator quidam et quasi gubernator: qui si ex omnibus unus optandus esset, quem tecum conferre possemus non haberemus. Quam ob rem, si me memorem, si gratum, si bonum virum vel ex hoc ipso, quod tam vehementer de Milone laborem, existimare potes, si dignum denique tuis beneficiis iudicas, hoc a te peto, ut subvenias huic meae sollicitudini et huic meae laudi vel—ut verius dicam—prope saluti tuum studium dicas. De ipso T. Annio tantum tibi polliceor, te maioris animi, gravitatis, constantiae, benevolentiae, erga te, si comploti hominem volueris, habiturum esse neminem.

(1) (a) Account for the mood and tense of *laudarim*, *repetam*, *adjuvisset*. The use of *deberem* is peculiar.

(b) Explain the meaning of *quendam* in the phrase *incredibilem quendam amorem*.

(2) (a) Explain the use of *qui* in the phrase *qui si ex omnibus*.

(b) What is the significance of each of the names *Titus*, *Annius*, *Milo*?

(c) Distinguish between *tantum* and *solum*, *promitto* and *polliceor*.

Translate:—

1. Ergo Quintilium perpetuus super
Urget! Cui pudor et iustitiae soror,
Incorrupta fides, nullaquo veritas
Quando ullum inveniet parem?

Multis ille bonis flebilis occidit,
Nulli flebilior, quam tibi Vergili.
Tu frustra pius hoc non ita creditum
Pecis Quintilium doces.

Quodsi Threicio blandius Orpheo
Auditam moderere arboribus fidem,
Non vanae redeat sanguis imagini,
Quam virga semel horrida,

Non lenis precibus fata recludere,
Nigro compulerit Mercurius gregi.
Durum: sed levius fit patientia,
Quidquid corrigere est nefas.

Write short notes on (1) *non ita creditum*, (2) *lenis recludere*.

2. Me dulces dominae musa Licymniae
Cantus, me voluit dicere lucidum
Fulgentes oculos et bone mutuis
Fidum pectus amoribus,

Quam nec ferre pedem dedecuit choris
Nec certare loco nec dare brachia
Ludentem nitidis virginibus sacro
Dianae celebris die.

Num tu quae tenuit dives Achaemenes
 Aut pinguis Phrygiae Mygdonias opes
 Permutare velis crine Licymniae,
 Plenas aut Arabum domos,
 Dum flagrantia detorquet ad oscula
 Cervicem, aut facili saevitia negat,
 Quae poscente magis gaudeat eripi,
 Interdum rapere occupet?

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 amination.

Explain and illustrate the construction *lucidum fulgentes*, and the allusions in *Achaemenes*, and *Mygdonias*.

Pass.

Translate into Latin Prose :—

When Fabricius had been sent as an ambassador to Pyrrhus, he heard Cineas say, that there was a man at Athens who professed to be a philosopher, and yet said that all our actions are to be referred to pleasure. Upon this Fabricius is said to have exclaimed, Would that our enemies were persuaded of this, in order that they might more easily be conquered, having given themselves up to pleasures. Nothing was more out of harmony (*alienum*) with his life than pleasure and luxury. His whole plate (*suppellex argentea*) consisted of one salt-cellar, and a little cup (*patella*) for the service of sacrifice, and even this was supported on a horn bottom (*pediculus*). He was dining at his fire-side on roots and herbs which he had pulled up in cleaning (*repurgando*) his land, when ambassadors from the Sabines came to him, and offered him a large sum of money. He replied in this way: As long as I shall be able to control my desires, I shall have no need of your money; take it back to those who want it.

Honors.

Do not accustom yourself to consider debt only as an inconvenience; you will find it a calamity. Poverty takes away so many means of doing good, and produces so much inability to resist evil, both natural and moral, that it is by all virtuous means to be avoided. Consider a man whose fortune is very narrow; whatever be his rank by birth, or whatever his reputation by intellectual excellence, what can he do? or what evil can he prevent? That he cannot help the needy is evident; he has nothing to spare. But perhaps his advice or admonition may be useful. His poverty will destroy his influence; many more can find that he is poor, than that he is wise; few will reverence the understanding that is of so little value to its owner. I say nothing of the personal wretchedness of a debtor, which, however, has passed into a proverb. Of riches it is not necessary to write the praise. Let it, however, be remembered, that he who has money to spare, has it always in his power to benefit others; and of such power a good man is always desirous.

Additional for Honors.

A. Translate :—

- Intactis opulentior
 Thesauris Arabum et divitiis Indiae
 Caementis licet occupes
 Tyrrhenum omne tuis et mare Apulicum;

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Si figit adamantinos
Summis verticibus diua Necessitas
Clavos, non animus meta,
Non mortis laqueis expedire caput.
Campestres melius Scythiae,
Quorum plaustra vagas rite trahunt domos,
Vivunt et rigidi Gotas,
Immetata quibus iugera liberas
Fruges et Cererem ferunt,
Nec cultura placet longior annua,
Defunctamque laboribus
Aequali recreant sorte vicarina.
Illic matre carentibus
Privignis mulier temperat innocens,
Nec dotata regit virum
Coniux, nec nitido fudit adultero,
Dos est magna parentium
Virtus et metuens alterius viri
Certo foedere castitas,
Et peccare nefas aut pretium est mori.

(a) Write a critical note on line 4.

(b) Of the various interpretations of *summis verticibus*, which do you prefer, and why?

2. Arva beata
Petamus arva divites et insulas,
Reddit ubi Cererem tellus inarata quotannis
Et imputata floret usque vinca,
Germinat et nunquam fallentis teretes olivae,
Suaque pulla fons ornat arborem,
Mella cava manant ex Ulce, montibus altis
Levis crepante lymphis desilit podo.
Illic iniussae veniunt ad mulctra capellae
Refertquo tanta grex amicus ubera,
Nec vespertinus circumgonit ursus ovile,
Neque intinascit alta viqeris haustus.
Pluraque folices mirabimur: ut neque largis.
Aquosus Eurus arva radat imbribus,
Pinguia nec siccis urantur somina glebis,
Utrumque rege temperante coelitem.
Non huc Argos contendit romigo pirus,
Neque impudica Colchis intulit pedem;
Non huc Sidonis torserunt corona nautae
Laboriosa nec cohors Ulixel.
Nulla nocent pecori contagia, nullius astri
Gregem aestuosa torret impotentia.
Iuppiter illa pio secrevit litora genti,
Ut inquinavit aere tempus aureum;
Aere, dehinc ferro duravit secula, quorum
Pis secunda vate mo datur fuga.

It has been proposed to omit the lines—

"Nulla nocent pecori contagia, nullius astri
Gregem aestuosa torret impotentia."

Point out their connexion with the context.

3. Write a short essay, with illustrations on Horace's use of the infinitive. Appendix, No. 11.

4. What data have we for determining the limits within which falls the composition of the first three books of Odes? General Class Examination.

5. Analyze accurately the structure of the Sapphic and the Alcaic stanzas, and point out any metrical irregularities you have observed in Horace.

B. Translate, adding brief notes where necessary :—

1. *Instinctos ruentesque ita disposuit, ut peditum auxilia quae octo milium erant, mediam aciem firmarent, equitum tria milia cornibus adfunderentur. legiones pro vallo sistere, ingens victoriae decus citra Romanum sanguinem bellanti, et auxilium, si pellerentur. Britannorum acies in speciem simul ac terrorem editioribus locis constiterat ita, ut primum agmen in aequo, ceteri per adclive ingum connexi velut insurgent; media campi covinnarius eques strepitu ac discursu complebat. tum Agricola superante hostium multitudine veritus, ne [simul] in frontem simul et latera suorum pugnaretur, diductis ordinibus, quamquam porrectior acies futura erat et arcessendas plerique legiones admonebant, promptior in spem et firmius adversis, dimisso equo pedes ante vexilla constitit.*

2. *Fenus agitare et in usuras extendere ignotum; ideoque magis servatur quam si vetitum esset. agri pro numero cultorum ab universis in vices in occupantur, quos mox inter se secundum dignationem partiuntur; facilitatem partiendi camporum spatia praebent. arva per annos mutant, et superest ager. nec enim cum ubertate et amplitudine soli labore contendunt, ut pomaria conserant et prata separent et hortos rigent: sola terrae reges imperatur. unde annum quoque ipsum non in totidem digerant species; hiems et ver et aestas intellectum ac vocabula habent, autumnus perinde nomen ac bona ignorantur.*

3. Explain the meaning of the following words, illustrating your answers by quotations where you can: *ambitiosus, assultare, delinquentum, circumspectare, laureatae, salarium, vexillum, agnati, cuneus, profugare, bigati, praeignus, seculum, revalescere.*

4. Give a short sketch of Agricola's achievements in Britain.

THIRD YEAR STUDENTS.

A.—Translate, with short notes where necessary :—

1. *Nihil habes quod mihi opponas, homo disertus, ut Mustelae Taurisio et Tironi Numisio videris? qui quum hoc ipso tempore stent cum gladiis in conspectu senatus, ego quoque te disertum putabo, si ostenderis quo modo sis eos inter sicarios defensorum. Sed quid opponas tandem, si negem me umquam istas litteras ad te misisse? quo me teste convincas? An chirographo? in quo habes scientiam quaestuosam. Qui possis? Sunt enim librarii manu. Iam invideo magistro tuo, qui te tanta mercede, quantam iam proferam, nihil sapere doceat.*

2. *Quid enim? istud, quod te sacerdotii iure facere posse dixisti, si augur non esses et consul esses, minus facere potuisses? Vide ne etiam facilius. Nos enim nuntiationem solum habemus: consules et reliqui magistratus etiam spectionem. Esto: hoc imperite: nec enim est ab homine numquam sobrio postulanda prudentia, sed videte impudentiam. Multis ante mensibus in senatu dixit se Dolabellae comitia aut prohiberetur auspiciis aut id facturum esse, quod fecit. Quisquamne divinae potest quid viti in auspiciis futurum sit, nisi qui de caelo servare con-*

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stituit ! quod neque licet comitiis, per leges, et, qui servavit, non habitis comitiis, sed prius quam habeantur, debet muniri.

3. Deinde tui municipes sunt illi quidem splendidissimi homines, sed tamen pauci, si quidem cum Atinatis conferantur: huius praefectum plena virorum fortissimorum, sic ut nulla tota Italia frequentior dici possit. Quam quidem nunc multitudinem videtis, iudices, in squalore et luctu supplicem vobis. Hi tot equites Romani, tot tribuni aetarii—nam plebem a iudicio dimissimus, quae euncta comitiis adfuit—quid roboris, quid dignitatis huius petitioni attulerunt? Non enim tribum Terentinam, de qua dicam alio loco, sed dignitatem, sed oculorum comiectum, sed solidam et robustam et assiduam frequentiam praebuerunt. Nostra municipia coniunctione etiam vicinitatis vehementer moventur.

4. Illud vero crimen de numis, quos in circis Flavinio deprehensos esse dixisti, caluit re recenti, nunc in causa refrixit. Neque enim qui illi ueni fuerint nec quae tribus nec qui divisor ostendit. Atque in quidem eductus ad consules, qui tum in crimen vocabatur, se inique a tuis iactatum graviter querebatur. Qui si erat divisor, praesertim eius quem tu habebas reum, cur abs te reus non est factus? cur non eius damnatione aliquid ad hoc iudicium praecedere comparasti? Sed neque tu haec habes neque eis confidis. Alia te ratio, alia cogitatio ad spem huius opprimendi excitavit. Magnae sunt in te opes, late patet gratia: multi amici, multi cupidi tui, multi fautores laudis tuae: multi huius invident, multis etiam pater, optimus vir, nimium retinens equestris iuris et libertatis videtur: multi etiam communes inimici reorum omnium.

5. Inter quae Severus Caecina censuit, ne quem magistratum, cui provincia obvenisset, uxor comitaretur, multum ante repetito concordem sibi coniugem et sex partus enixam, seque quo in publicum statueret domi servavisse, cohibita intra Italiam, quamquam ipse pluris per provincias quadraginta stipendia explevisset. haud enim frustra placitum olim, ne feminae in socios aut gentes externas traherentur: inesso mulierum comitatu quae pacem luxu, bellum formidine morantur, et Romanum agmen ad similitudinem barbari incensus convertant. non inbecillum tantum et inparem laboribus sexum, sed si licentia adsit, saevum, ambitiosum, potestatis avidum; incedere inter milites, habere ad manum centuriones; praesidisse nuper feminam exercitio cohortium, decursa legionum. eogitarent ipsi, quotiens repetandarum aliqui arguerentur, plura uxoribus obiectari; his statim adhaerescere deterrimum quendam provincialium, ab his negotia suscipi, transigi; duorum egressus coli, duo esse praetoria, pervicacibus magis et impotentibus mulierum fassis, quae Oppis quondam aliisque legibus costrictae, nunc vinculis exsolutae domos, fora, iam et exercitus regerent.

6. Translate and explain:—

(a) Nec sane ideo a maioribus concessum est ogredi aliquando relationem, et quod in communi conducat loco sententiae proferro, ut privata negotia et res familiares nostras hic angamus cum invidia senatus et principum.

(b) Exiit videntur Elephantinen et Syonen, claustra olim Romani imperii, quod nunc rubrum ad mare patet.

(c) Relatum deinde de moderauda Pappia Poppaea, quam senior Augustus post Juliae rogationes incitandis caelibum poenis et augendo aerario sanxerat.

(d) Servos quoque Silani; ut tormentis interrogarentur, actor publicus municipi acceperat.

(e) Nam si ita esset, quod patres apud maiores nostros non potuerant,

ut reprehensores essent comitiorum, id haberent iudices, vel quod multo minus esset ferendum.

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(J) Sed ut redeam ad Plandum, nunquam ex urbe is afuit nisi sorte, lego, necessitate.

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B.—1. The Imperial power was a combination of several powers which had existed under the Republic.

2. State the origin and trace the development of the law of Majestas, and illustrate its application under Tiberius.

3. Give a sketch of the early life of Tiberius. What judgment have you formed of the candour of Tacitus' narrative of his government?

4. State what you know about C. Fabricius Luscinus, Q. Lutatius Catulus, M. Porcius Cato, M. Livius Drusus, P. Rutilius Rufus.

LATIN PROSE COMPOSITION.

Translate into Latin Prose:—

But if I profess all this impolitic stubbornness, I may chance never to be elected into Parliament. It is certainly not pleasing to be put out of the public service. But I wish to be a member of Parliament, to have my share of doing good and resisting evil. It would therefore be absurd to renounce my objects in order to retain my seat. I deceive myself indeed most grossly if I had not much rather pass the remainder of my life hidden in the recesses of the deepest obscurity, feeding my mind even with the visions and imaginations of such things, than to be placed on the most splendid throne of the universe, tantalized with a denial of the practice of all which can make the greatest situation any other than the greatest curse. Gentlemen, I have had my day. I can never sufficiently express my gratitude to you for having set me in a place where I could lend the slightest help to great and laudable designs. If by my vote I have aided in securing to families the best possession, peace; if I have joined in reconciling kings to their subjects, and subjects to their prince; if I have thus taken part with the best of men in the best of their actions, I can shut the book. I might wish to read a page or two more; but this is enough for my measure,—I have not lived in vain.

Translate, adding brief notes where necessary:—

1. Sr. Non enim possum quin exclamem: euge euge, Lusiteles, τάλαν: facile palmam habes: hic victus: vicit tua comodia. hic agit magis ex argumento et versus melioris facit. etiam ob stultitiam tuam te teuris? multabo mina. Lx. quid tibi interpellatio aut in consilium huc accessisti? Sr. eodem pacto, quo huc accessi, apsecessero. Lx. i hac mecum domum, Lusiteles: ibi de istis rebus plura fabulabimur. Lv. nil ego in occulto agere soleo. meus ut animus, eloquar: si mihi tua soror, ut ego sequem censeo, ita nuptum datur, sine dote, neque tu hinc abiturus quod meumst id erit tuum: sin aliter animatus es, bene quod agas eveniat tibi, ego amicus nunquam tibi ero alio pacto: sic sententias. Sr. abiit hercle ille quidem equid audis, Lusiteles? ego te volo. hic quoque hinc abiit. Stasime, restas solus. quid, ego nunc agam, nisi uti sarcinam constringam et clipeum ad dorsum accommodem, fulmentas iubeam suppingi soccis? non sisti potest. video, caculam militarem me futuram haud longius.

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2. SVO. fac me, si scis, certiorum hinc hominum ubi habitante, pater.
CH. quid eos quaeris? aut quis es? aut unde es? unde advenis?
SVO. census quom sum iuratori recte rationem dedi.
CH. * * * * *
SVO. multa simul rogas: nescio quid expediam potissimum.
si unum quidquid singellatim et placide precontabere,
et meum nomen et mea facta et itinera ego faxo scias.
CH. faciam ita ut vis; agendum, nomen primum memora tuum
mihi.
SVO. magnam facinus incipissis petere. CH. quid ita? SVO. quis,
pater,
si ante lucem ire hercle occidias a meo primo nomina,
conubium sit noctis, priusquam ad postremum perveneris.
CH. opus factast vincto ad tuum nomen, ut tu praedicas.
SVO. est minusculum alteratum quasi vesculum vinarium.
CH. quid est tibi nomen, adolescens? SVO. 'Pax' id est nomen
mihi:
hoc cotidianumst. CH. edepol nomen nugatorium:
quasi dicas, si quid crediderim tibi 'pax' perissem illico.
hic homo solide suocphantast.

3. Sed primum multas expromam monte querelas,
canitiem terra atque infuso pulvere foedans;
inde infecta vago suspendam lintea malo,
nostros ut luctus nostraeque incendia mentis
carbæus obscurota dicet ferrugine Ibero.
Quod tibi si sancti concesserit incola Itoui,
quae nostrum genus ac sedes defendero Erechthoi
annuit, ut tauri respergis sanguine dextram,
tum vero facito, ut inuicem tibi condita corde
haec vigeant mandata, nec ulla obliuisceret aetas:
ut simul ac nostrae invisent lumina colles,
funestam attonitae deponant undique vestem,
caudicibus intorti sustollant vela rudentes,
quamprimum cernuas ut lacta gradibus amento
agrosque, quum te reducere aetas prospera sistot.
Haec mandata prius constanti mente teneantem
Thesca, cum pulvae ventorum flumine nubes
aerium nivei montis, liquere, cacumen.

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Give the chief commendations which have been proposed of the 227th line.

4. Cum interea infirmo quatientes corpora motu
veridicos Parens coeperunt edere cantas.
His corpus tremulum complectens indiguo vestis
candula purpurea talos incinxerat ora.
Anuso niveo residebant vertice vittae,
aeternumque manus eripabant rite laborem.
Laeva colum molli lana retinebat amictum,
dextera tum leviter deducens fila supinis
formabat digitis, tum prono in pollice torquens
libratum tereti versabat turbine fusum:
atque ita decerpens aequabat semper opus dona,
lanaeque aridulis haerebant morsu labellis,
quae prius in levi fuerant exstantia filo.
Ante pedes autem candentis mollia lanae
vellera virgati custodibant calathisci,

5. Translate and explain :—

- (1) (a) Faxo hau tantillum dederis verborum mihi.
 (b) Inconciliastine eum qui mandatust tibi?
 (c) Falsone an vero laudent, culpent quem velint,
 Non flocci faciunt.
 (d) Pejus perit quasi saxo salist.
 (e) Tute pone te latebis facile, ne inveniat te honos.
 (2) (a) Pars obscura cavis celebrabant orgia cistia.
 (b) Naiasin linquens doris celebranda choreis.

Give any other emendations of this line you think worthy of attention.

- (c) Cum teres excelso coascervatum aggere bustum
 Excipiet niveos percussae virginis artus.
 (d) Semper maesta tua carmina morte tegam.
 (e) Gaudete vosque, O Lydiae lacus undae:
 Ridete quidquid est domi cachinnorum.

6. Translate and explain the following words and phrases: Exaedificare, posiveris, quid ais!, tarpessite, ferentarius, euscheme, cluere, ballista, abin hinc dierecte, turben, externare, concubium, lutitare, vindex, graphicus.

7. Translate into Latin verse :—

When winter winds are piercing chill,
 And through the hawthorn blows the gale,
 With solemn feet I tread the hill
 That overbrows the lonely vale.

Where twisted round the barren oak,
 The summer vine in beauty clung,
 And summer winds the stillness broke,
 The crystal icicle is hung.

Alas how changed from the fair scene,
 When birds sang out their mellow lay,
 And winds were soft and woods were green,
 And the song ceased not with the day.

But still wild music is abroad,
 Pale desert woods, within your crowd,
 And gathering winds in hoarse accord
 Amid the vocal reeds pipe loud.

MODERN LANGUAGES.—*Examiner, Professor Meisner.*

FIRST YEAR STUDENTS.

FRENCH.

Translate into French :—

I.—You will not be happy in old age, if you are not diligent in youth. They would have more money, if they had been less prodigal. We shall accompany our brother as far as Marseilles. The soul is immortal. The poorest men are often the most generous. He conceals his designs. Everything reminds man of his duty. The moon shines. She does not write nearly as well as her brother. Do you want anything? How long have

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you been here? It is better to be silent than to say foolish things. Never speak ill of your neighbour. I am sorry to have displeased you.

II.—Do you know his father and mother. I knew neither his father nor his mother. Has Richard written to his wife? He has written to her yesterday. Do you see those mountains? No, I am short-sighted. Is it the postman that knocks? No, it is the washerwoman. Why do we eat? We eat in order to live, and we do not live in order to eat. There are two horses, which do you prefer? I prefer this one. At what o'clock does your French lesson begin? We begin at nine o'clock.

III.—Keep these children quiet. I should never have known you again. The canals of Holland are covered with boats. The wealth of the Patriarchs consisted in cattle, especially goats, sheep, oxen and asses. I beg your pardon, I have not done it on purpose. Every one has his duty to fulfil; do yours, I shall fulfil mine. I shall arrive this day week. Here lie the heroes who have sacrificed themselves for their country. I will teach you manners. Let us learn to despise prejudices. Do what you like. Can I believe my eyes? Do not drink out of this glass. What do you wish me to do? You are pleased to say so.

Translate into English :—

Bernard Palissy est un grand exemple de ce que peut une volonté ferme et persévérante. Né de parents pauvres, qui purent à peine lui faire donner quelques leçons de lecture, d'écriture et d'arpentage, il apprit seul le dessin, et devint très habile dans cet art. Avec le produit de quelques travaux d'arpentage et de peinture sur vitraux, il visita, pour s'instruire, une grande partie de la France. Il avait déjà près de quarante ans et était établi à Saintes, lorsqu'ayant vu une magnifique coupe émaillée, il résolut de chercher le secret de la composition de l'émail, secret alors connu seulement de quelques artistes italiens qui s'en servaient pour faire de beaux ouvrages qu'ils vendaient fort cher. Il se mit à l'œuvre. Des essais infructueux épuisèrent ses économies; il ne se rebuta point. Le prix d'une carte des marais salants de la Saintonge, qu'il fut chargé de lever, fut consacré à de nouvelles tentatives. Ensuite il emprunta de l'argent pour faire construire un fourneau, brûla, pour le chauffer, ses meubles et les planches de sa maison, et donna en paiement à l'ouvrier qui l'aiderait une partie de ses habits. Enfin, après seize années de travaux, le plus brillant succès couronna ses efforts. Ses belles poteries émaillées, ses vases, ses figurines, achetées à l'étranger par le roi Henri II. et par tous les amateurs des arts, ornèrent les jardins et les châteaux, et la France se trouva enrichie d'une industrie nouvelle.

T. H. BARRAU.

GERMAN.

Translate into German :—

John is learning the German letters. The enemy has bombarded the town. My friend has told me that he will buy an estate. I have been waiting for you. My dearest friend. He follows the example of his elder brother. Who has made the fewest mistakes? She will do it herself. We shall wash ourselves? I have lost my German grammar; lend me yours. Can you write with such pens? Which poem have you read? Whose handwriting is this? What o'clock is it? It is half-past five. I have not been able to do it. When I awoke, I saw my friend standing before me. Wait, till I have finished my work. I shall tell

an umbrella, for it is going to rain. I am ill, on that account I cannot go out. Many read, but few read with profit. The rich proprietor of the large estate is a charitable man.

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Translate into English :

In Italien, besonders in dem obern Theile, gab es, wie noch heut zu Tage, viele blühende Städte: Mailand, die vermehmste Stadt, dann Pavia, Verona, Venedig, und viele andere mehr. Diese waren durch die Betriehsamkeit ihrer Bürger, besonders seit dem Krenzzügen durch den Handel mit dem Morgenlande, sehr reich geworden. Die am Meere gelegenen holten auf ihren Schiffen die kostbaren Waaren des Morgenlandes und führten sie dann, mit Hülfе anderer Städte, weiter in's Land und über die Alpen nach Deutschland. Da vertheilten sie diese Waaren auf verschiedenen Wegen im Lande umher, oder wanderten weiter nach Norden zu, bis an die Nord- und Ostsee, und weiter nach England, Dänemark, Schweden, Norwegen. Auch die deutschen Städte, die an diesen großen Handelsstraßen lagen, wurden nach und nach sehr reich und legten dazu in der Zeit, woron jetzt die Rede ist, den Grund. Aber noch viel schneller ging es mit den italienischen Städten.—KOHLEBAUSCH.

SECOND YEAR STUDENTS.

FRENCH.

Translate into French :

I.—Many people are deficient in common sense. He is fond of reading newspapers. He will wait for you at the station. Do you sometimes think of your old friends? I do not think he knows it. I must have finished before ten o'clock. It is important that you should come with me. I must start to-morrow. Let him come! I do not believe that he deceives us. I should be sorry that any misfortune should happen to him. This gentleman is a Frenchman. They have been mistaken. You will see in this town palaces and huts, churches and theatres. He neither eats nor drinks, because he is neither thirsty nor hungry.—EUGENE.

II.—Napoleon entered Moscow only at the approach of darkness. He stopped in one of the first houses of the suburb. It was there that he appointed Marshal Mortier governor of this capital. Above all, said he to him, no pillage. Defend Moscow alike against friends and foes. This night was miserable. Sinister rumours succeeded one another. Frenchmen came, inhabitants of this country, and even an officer of the Russian police, in order to report the burning of the town. The fire broke out in the centre of the town, in the richest quarter.—SEGUR.

III.—Clive had been only a few months in the army when intelligence arrived that peace had been concluded between Great Britain and France. Dupleix was in consequence compelled to restore Madras to the English company; and the young ensign was at liberty to resume his former business. He did indeed return for a short time to his desk. He again quitted it in order to assist Major Lawrence in some petty hostilities with the natives. While he thus was wavering between a military and commercial life, events took place which decided his choice.—MACAULAY.

IV.—Philological Questions.

I. How far does etymology guide you in determining whether an A is aspirated or mute.

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amination.

2. Give the etymology of *cheval*, *parole*, *armée*, *vertu*, and state to what kind of Latinity each word belongs.

3. Explain the main difference between French and Latin verification.

GERMAN.

Translate into German :—

Well, I have no objection. I do it with pleasure. We have heard it, indeed, but we have not understood it. Be sure not to forget it. Read the whole passage once more. My German teacher comes every other day. I have let the bird fly. I stood long before the picture. We sailed along the coast. The train having been detained by an accident, the letters have not arrived at the usual time. Charles the Fifth would not have been so unfortunate, had he been as prudent as he was valiant. I remember no longer the particular circumstances. The King has appointed him ambassador to the Russian court. The palace of the duke is a splendid edifice. The brothers of the count serve as officers in the Austrian army. I require two pounds of sugar and three bottles of wine. I have been advised to address myself to the King.

Translate into English :—

Der Briefwechsel zwischen beiden Königen hörte nun auf, allein der sächsische General Spörcken setzte ihn in Augusts Namen mit Friedrich fort. Der Hauptgegenstand desselben betraf eine Anzahl Manusprieste, die man von Polen aus durch Schlesiens und Sachsens zur Erleichterung des Verkehrs aufstellen wollte. Friedrich schien anfangs nicht abgeneigt das Ansuchen zu gestatten, allein da immer neue Versuche des sächsischen Hofes entdeckt wurden, sowohl dem Feinde von Allem Nachricht zu geben, als die in preussischen Dienst getretenen Sachsen zur Flucht zu veranlassen, so brach er den Briefwechsel mit Spörcken kurz ab. Er sagte in seinem Schreiben vom 2. Dezember: „Man mißbraucht ganz meine Mühsung. Nach dem unfreundlichen Betragen Ihres Hofes bleibt mir nichts als das Recht der Waffen übrig. Dies ist der letzte Brief, den Sie von mir erhalten.“—
ANCKENHOLZ.

THIRD YEAR STUDENTS.

FRENCH.

Translate into French :—

The letter of Columbus to the Spanish monarchs, announcing his discovery, had produced the greatest sensation at court. The event it communicated was considered the most extraordinary of their prosperous reign. The sovereigns themselves were for a time dazzled by this sudden and easy acquisition of a new empire, of an indefinite extent and apparently boundless wealth; and their first idea was to secure it beyond the reach of question or competition. Shortly after his arrival in Seville, Columbus received a letter from them, expressing their great delight, and requesting him to repair immediately to court, to concert plans for a second and more extensive expedition.—WASHINGTON IRVING.

Literary Questions :—

1. State the subjects of the principal *Chansons de Geste*.
2. Give an account of Malherbe.

3. Mention the principal comedies of Molière, and briefly indicate their subjects. Appendix, No. 11.
 4. State what you know of Rousseau. General
 5. Mention the principal poets of the Romantic School. Class Ex-
amination.

MATHEMATICS.—*Examiner, Professor Purser.*

FIRST YEAR STUDENTS.

ALGEBRA, &c.

1. A farmer sells to one person 7 cows and 9 sheep for £105, to another 5 cows and 11 sheep for £83. How much should a third pay for 9 cows and 13 sheep?

2. Solve the equations—

$$1^{\circ} \frac{1}{14} \left(3x + \frac{2}{3} \right) - \frac{1}{7} \left(4x - 6\frac{2}{3} \right) = \frac{1}{2} (5x - 6)$$

$$2^{\circ} 3x^2 - 2x - 8 = 0.$$

$$3^{\circ} \sqrt{x} + \sqrt{x - \sqrt{1-x}} = 1.$$

3. Given $\frac{5x}{4} - \frac{2y}{3} = 11$ $\frac{x}{3} + \frac{y}{2} = 9$; find x and y .

Given $x^2 + y^2 = 19$ $x^2 + y^2 - xy = 19$; find x and y .

4. Insert three geometric means between a and b .

Write down an arithmetic series of 8 terms of which $\frac{2}{3}$ shall be the first, and $\frac{7}{5}$ the last term.

Prove that the geometric mean between two quantities is always less than the arithmetic mean.

5. Write down the expansion of $(a+x)^n$. Find the co-efficient of x^2 in $(2-x)^{10}$ and of x^4 in $(1-x^2)^5$.

6. Prove the elementary properties on which the use of logarithms depends.

Calculate by the tables—

$$\frac{(5.37)(20.9)}{(4.19)(.815)(.0054)} \text{ and } \left(\frac{13}{12} \right)^{10}$$

7. Assuming the Binomial theorem for positive integral exponents; prove it all for exponents.

8. If $A_0, A_1, A_2, \&c.$, are the successive coefficients in the expansion of $(x+y)^n$ so that $(x+y)^n = A_0x^n + A_1x^{n-1}y + \dots + A_ny^n$

Sum the series—

$$1^{\circ} A_0 + A_1 + A_2 + \&c.$$

$$2^{\circ} A_0 + \frac{1}{2}A_1 + \frac{1}{4}A_2 + \&c.$$

$$3^{\circ} A_0^2 + A_1^2 + A_2^2 + \&c.$$

9. Seven men are seated two successive days at a round table. Find the probability if they take their places at random that no one will have the second day either of the same neighbours he had on the first.

10. Define a determinant. Show how to find the sign of any element. Investigate the square of a determinant of three rows.

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Express the result of eliminating x between a biquadratic and a cubic in the form of a determinant.

11. Calculate the value of the lease of a farm let at a rent of £120 under its value for seventeen years, interest being taken at four per cent.

If the population of a country increased fourfold in 800 years, calculate the annual rate of increase supposed uniform throughout this period.

CONIC SECTIONS.

1. The tangents from any point to a conic subtend equal angles at the focus.

2. If a right cone be cut by a plane the curve of section is a conic of which the eccentricity $= \frac{\sec \alpha}{\sec \phi}$ where α = semiangle of cone and ϕ = angle which plane of section makes with the axis.

3. The tangent to an hyperbola cuts off a constant area from the asymptotes, and is bisected at the point of contact.

4. Find the condition that through four given points it may be possible to draw a conic similar and similarly placed to a given one.

5. A variable conic having a given focus (S) and given parameter touches a given right line, prove that the locus of the opposite extremity of the focal chord which passes through the point of contact is a conic having (S) for focus and the given line as directrix; show also that this conic is the envelope of the variable conic.

GEOMETRY AND TRIGONOMETRY.

1. The sum of the squares of two lines is equal to twice the square of half their sum together with twice the square of half their difference. Prove the proposition which establishes this.

2. If two right lines cut one another within a circle, the rectangles under their segments are equal.

3. Give an accurate definition of *ratio*.

Prove that if four right lines be proportionals the rectangle under the extremes is equal to the rectangle under the means.

Prove the principle of "alternando."

4. Define *similar* figures. Construct an isosceles triangle equal to a given square, and such that each of the equal sides of the triangle be double the third side.

5. Define a *radian*. Assuming the known value for the ratio of the circumference of a circle to its diameter; find the number of seconds in a radian.

Express an angle of $17^{\circ} 34'$ in radians, and an angle of $\cdot 0395$ radians in degrees, minutes, and seconds.

6. Prove the formulae—

$$\begin{aligned}\sin A - \sin B &= 2 \sin \frac{1}{2}(A-B) \cos \frac{1}{2}(A+B) \\ \tan(A-B) &= \frac{\tan A - \tan B}{1 + \tan A \tan B}\end{aligned}$$

7. Given the three angles of a triangle and one side; prove the formula by which you would find the other sides.

$$A=63^{\circ} 25' \quad B=42^{\circ} 9' \quad C=74^{\circ} 26' \quad a=151.7.$$

8. Given $a=10.37$ $b=23.02$ $C=56^{\circ} 34'$

Calculate the area and the other angles.

9. Sum the series—

$$1^{\circ} \tan x + \frac{1}{2} \tan \frac{x}{2} + \frac{1}{4} \tan \frac{x}{4} + \dots, \text{ to } n \text{ terms.}$$

$$2^{\circ} 1 + \frac{n}{1} \sin \theta + \frac{n \cdot n - 1}{1 \cdot 2} \sin 2\theta + \dots, \text{ where } n \text{ is an integer.}$$

10. Prove that if m be an odd number—

$$\tan \frac{\pi}{m} \tan \frac{2\pi}{m} \dots \tan \frac{1}{2} \frac{(m-1)\pi}{m} = \sqrt{m}.$$

11. Find the volume of a tetrahedron.

Show that if in a tetrahedron $ABCD$, AB is at right angles to CD , and AC to BD , then AD is at right angles to BC .

Also that in such a tetrahedron the sum of the squares of any pair of opposite edges is equal to the sum of the squares of any other pair.

12. The sum of the plane angles formed at any convex polyhedral angle is less than four right angles.

13. Prove that in a right angled spherical triangle $\sin a = \sin A \sin c$ $\csc c = \cot A \cot B$.

14. Two lines proceeding from a point make angles θ θ' with the horizontal plane, and an angle ϕ with one another. Find the angle between their projections on the horizontal plane.

15. Given the latitude and longitude of two places, show how to calculate the direction of the great circle joining them.

16. Prove the expression for the area of a spherical triangle in terms of two sides and the included angle.

Ex. $\alpha = 34^{\circ} 20'$ $\beta = 48^{\circ} 6'$ $\gamma = 50^{\circ} 14'$. Radius of sphere = unity.

17. Given base of a spherical triangle and sum of sides, find the locus of the point where a perpendicular to one side at the extremity of the base meets the external bisector of the vertical angle.

SECOND YEAR STUDENTS.

CO-ORDINATE GEOMETRY.

1. Describe fully what curves are represented by the following equations—

$$1^{\circ} y = 3 \quad 2^{\circ} x^2 + y^2 = 3x \quad 3^{\circ} y^2 - 3x^2 = 0.$$

2. Find the equation of a line passing through the point $x = 3$ $y = 2$, and making an angle of 45° with the axis of x .

Find also the equations of the lines through the origin parallel and at right angles to the last line.

3. Taking the base of a triangle and the perpendicular from the vertex as axes, investigate the equations of the perpendiculars let fall from the base angles on the opposite sides and also of the lines joining their feet to the origin.

Hence show that these lines make equal angles with the base.

4. A system of lines are drawn from the origin across a conic; prove that the locus of the points cutting them harmonically is a right line.

5. Transform the equation $14x^2 - 4xy + 11y^2 = 5$, so as to make the new axes the axes of the conic.

6. Investigate—

1^o The polar equation of an ellipse the focus being the pole.

2^o The polar equation of the chord joining two points θ_1 and θ_2 .

7. Find the equation of the tangent to an ellipse.

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Shew that if ξ and η are the intercepts which a tangent cuts off on the axes—

$$\frac{a^2}{\xi^2} + \frac{b^2}{\eta^2} = 1.$$

8. Investigate the reciprocal of a circle from any origin.

A system of conics having the same focus and latus rectum touch a given right line; find their envelope.

9. If through a given point on a conic any two lines at right angles be drawn to meet the curve, the line joining their extremities will pass through a fixed point on the normal.

10. Find the equation of the evolute of a conic.

11. Shew that by a suitable choice of the triangle of reference the equations of two given conics may be thrown into the forms—

$$Aa^2 + B\beta^2 + C\gamma^2 = 0 \quad A'a^2 + B'\beta^2 + C'\gamma^2 = 0.$$

If an equation of the last form represent a parabola; find the co-ordinates of its focus, and the equation of its directrix.

12. Find the equation of the envelope of all the chords of curvature of an ellipse.

DIFFERENTIAL AND INTEGRAL CALCULUS.

1. Examine the signification of $\frac{dy}{dx}$ when y is the ordinate and x the abscissa of a curve.

Find the inclination of the curve $y = 2x - \frac{x^3}{2}$ at the point $x = a$ $y = a$, and find at what point the tangent is parallel to the axis of x .

2. Differentiate—

$$(2x-1)^3 \quad (3x+5)\sin 2x \quad \frac{x^2+3}{\sqrt{x^2+1}}.$$

3. Find when—

$$\frac{1+x}{\sqrt{1+3x^2}}$$

is a maximum or minimum.

4. Express in terms of the vertical angle the ratio of radius of the inscribed to that of the circumscribed circle of an isosceles triangle.

Hence find when the two radii are most nearly equal.

5. Determine the limiting value of $\frac{x \log(1+x)}{1-\cos x}$ when $x=0$.

6. Examine what curves are represented by the equations—

$$y = \sin x + \frac{1}{2} \sin 2x + \frac{1}{3} \sin 3x + \&c.$$

$$y = \sin x + \frac{1}{2} \sin 3x + \&c.$$

7. Apply the integral calculus to find—

1° The volume of a sphere.

2° The area of the portion of the curve—

$$y = 2x - \frac{x^3}{2}$$

cut off by the axis of x .

8. Required—

$$\int \sin \frac{x}{3} dx$$

$$\int \frac{x dx}{\sqrt{x^2-2}}.$$

9. Required—

$$\int \frac{x^3 dx}{(a^2+x^2)^{\frac{3}{2}}}$$

$$\int \frac{dx}{(1-x)^2(1+x)^2}.$$

10. Prove that $s - t = \int p d\omega + \text{const.}$

Hence show that if P and Q are two points whose eccentric angles satisfy the relation $\tan \phi \tan \phi' = \frac{b}{a}$ then the difference of the arcs AP and BQ is rectifiable.

Show that the envelope of the line PQ is the hyperbola

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = \frac{1}{a-b}$$

11. Prove the expression for the radius of curvature ρ in x and y , 2° in x and θ co-ordinates.

Apply to the rectangular hyperbola and the cardioid.

12. Trace the curve

$$y = a \sqrt{\frac{a-x}{x}}$$

and determine its point of inflexion.

13. Determine

$$\int_0^{\pi} \left(\frac{1}{x} - 2 \cot 2x \right) dx.$$

NATURAL PHILOSOPHY.—*Examiner, Professor Everett.*

SECOND YEAR ARTS, AND FIRST YEAR ENGINEERING STUDENTS.

EXPERIMENTAL PHYSICS.

[No credit will be given for numerical answers unaccompanied by work. The books must not be mutilated.]

1. Describe the behaviour of water and mercury in fine glass tubes. Write down the quantitative law connecting capillary depression with surface-tension and angle of contact, in a straight tube the form of whose section is unrestricted.

2. A number of metallic balls are insulated and placed in a row, with spaces of air between. A positive charge is given to the first ball of the row. Describe the distribution of electricity on the other balls, supposing that no discharge takes place between any of the balls.

3. Why is it that in the condensing gold-leaf electroscope, the leaves open out wider as the condensing plate is lifted off?

4. An insulated metal can receives a charge of electricity. Compare the conditions of its inner and outer surfaces (1) as regards distribution of electricity; (2) as regards potential. If a metal ball connected with the earth is lowered into the interior without touching the can, what changes are produced (1) in the distribution; (2) in the potential?

5. Two copper wires are attached to the binding screws of a delicate galvanometer, and are joined at their other ends by an iron wire. Describe what happens when one of the junctions of iron and copper is very gradually raised from the temperature of the air up to a red heat.

6. In what position should a galvanometer be placed before sending a current through it? Under what restrictions is the deflection approximately proportional to the current?

7. Define the magnetic meridian and a magnetic meridian. If a magnetized needle, free to turn round a definite horizontal axis through its centre of gravity, places itself vertically, what is the position of this horizontal axis. Compare the number of vibrations per minute made by

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the needle in this position with the number which the same needle would make if vibrating in a horizontal plane.

8. How would you operate to convert a common sewing needle into a permanent magnet, by means of a given bar magnet? How can you predict which end of the needle will be the north pole? How would you operate to make both ends of the needle north-poles and the middle a south pole? What name is given to the middle in this case?

9. A wire is stretched to double its original length. What is the change in its total resistance, the quality of its material being supposed unaltered, and its section being supposed uniform? If two wires ABD, ACD are joined at A and D, what is the resistance between A and D, the resistance of ABD being r_1 and the resistance of ACD being r_2 ?

10. What are the wave lengths of the fundamental note and first two overtones of a stopped pipe; and what are the musical names of the intervals between the fundamental and the other two?

11. Describe the simplest mode of computing the velocity of sound in wood from observation of the note emitted by a wooden rod.

12. If the velocity of light in air is $3 \cdot 10^{10}$ centimetres per second, and the wave-frequency for light of the refringibility of the F line is $6 \cdot 18 \cdot 10^{14}$ per second, compute the wave-length of this light in air; also in glass of index 1.6.

13. Reduce the following from the centigrade to the Fahrenheit scale:—Temperature 45° . Range 25° . Latent heat of water 79.25. Coefficient of expansion of air .00366.

14. A gramme of lead at atmospheric temperature requires 15.6 grammes degrees of heat to melt it. Find the velocity with which a leaden bullet must strike a target that it may just be melted by the collision, supposing all the mechanical energy of the motion to be converted into heat, and to be taken up by the bullet. [The equivalent of a gramme degree is 42 million ergs.]

SECOND YEAR ARTS AND ENGINEERING STUDENTS.

MATHEMATICAL PHYSICS.

[No credit will be given for numerical answers unaccompanied by work. The books must not be mutilated.]

1. Assuming the parallelogram of forces, prove the triangle of forces.

2. A uniform rod 10 feet long balances about a point 3 feet from one end, when a weight of 20 lbs. is hung from this end. Find the weight of the rod.

3. A stone is thrown upwards with a velocity which would carry it to a height of 100 feet. How long does it take to ascend the first 50 feet?

4. Prove that the effect of a couple is not altered by moving it parallel to itself in any manner.

5. Define uniform acceleration for a body moving in a straight line; and show that if the velocity of the body be represented by a line, the whole space described will be represented by an area.

6. State the three laws of motion.

7. Prove that the work required to communicate velocity v to a body of mass m is $\frac{1}{2}mv^2$; stating distinctly what unit of work you employ.

8. A piece of platinum weighs 42 grammes in air, and 15 grammes in mercury of *sp. gr.* 13.6. Find the *sp. gr.* of the platinum.

9. Water in freezing expands in the ratio of 1 to 1.087. Find the maximum load which a solid iceberg of 1,000 tons can sustain in fresh water.

10. A plate is supported at three points, A, B, C, and its centre of

gravity is G . The line AG produced meets BC in D . The ratio $\frac{AG}{GD}$ is given $=m$, and the ratio $\frac{BD}{DC}=n$. What parts of the whole weight are supported at A, B, C respectively?

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11. Define the index of refraction for light passing from one medium into another. If the index from air to glass be 1.6, and the index from air to water 1.336, find the index from water to glass. If the focal length of a lens of this glass be 1 inch in air, what will it be in water?

HONOR QUESTIONS.

12. Prove that the minimum deviation produced by a prism of small angle A is $(\mu - 1) A$.

13. A pendulum of length l , consisting of a thread with a leaden ball at the end, revolves conically at the rate of n revolutions per second. Find the inclination of the thread to the vertical.

14. A projectile is to pass through two given points. Show how the direction and velocity of projection are to be computed.

15. Prove that, if two projectiles strike together in the air, the motion of their common centre of gravity is unaltered by the collision.

16. A trough formed of two boards at right angles to each other, is symmetrically placed at an inclination α to the horizontal; and a cylinder, laid in it, is on the point of sliding. Find the coefficient of friction.

17. Three strings stretched with constant forces P, Q, R , are knotted together, and are in equilibrium. The circumstances are such that, if the knot is moved in any direction, each string still passes through a fixed point. If the lengths from the knot to the fixed points are p, q, r , compute the work done in a small displacement x of the knot perpendicular to the plane of the strings. Show that the result is consistent with the principle of virtual velocities.

18. A rigid body turns uniformly on a horizontal axis. Show that the resultant of gravity and centrifugal force on any particle of the body passes through a fixed point; and that all these points lie in one horizontal line.

19. A convex lens of 12 inches focal length is at the distance of 10 inches from a small object on its axis; and the observer's eye is at a distance of 10 inches on the other side of the lens. Compare the angular diameter of the image as thus seen, with the angular diameter of the object as seen from the same position when the lens is removed.

20. A tube open at one end and closed at the other has the form of a V . The two branches are equal, and the bore is uniform. Mercury is poured in at the open end in quantity equal to half the content of one branch. Water is then poured in till the open branch is full. Compare the lengths finally occupied by the air, the mercury, and the water; the vertical height of each branch being double the height of the barometer, and the specific gravity of mercury being 13.6.

[Honor Candidates may also answer questions 3, 4, 5, 6, 7 of the Pass paper.]

THIRD YEAR ARTS STUDENTS.

MATHEMATICAL PHYSICS.

1. Write down the formulae:

- (1) For the x -component of the velocity of the point $x y z$ of a rigid body, the 6 components of motion of the body being given;—
- (2) For the moment, in plane yz , of a set of forces about the point $x y z$, the 6 components of the resultant force and couple being given;—

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- (3) For the moment of momentum of a system of bodies round a given line parallel to the axis of x ; the mass of the system, the motion of the centre of the mass, and the moments of momentum round the axis of co-ordinates being given.
2. (1) A force P acts along a line AB . Find an expression for its moment round another line CD .
- (2) A rigid body rotates with angular velocity P round a line AB . Find an expression for the component velocity of the point C along the straight line CD .
- (3) Show that the expressions obtained in (1) and (2) denote 6 times the volume of a certain tetrahedron.
3. A uniform rectangular plank rests with one end against a wall and the other against a floor, its sides being in vertical planes. Supposing both wall and floor to be inclined planes, the wall sloping backwards, and the floor sloping away from the wall, find the greatest inclination the plank can have without slipping, the coefficients of friction against the wall and floor being given.
4. Show that the attraction of a uniform straight line upon a given external point, is the same as that of a certain arc of the same linear density. Hence determine the form of the lines of force for a uniform straight line.
5. Prove that $\frac{dX}{dx} + \frac{dY}{dy} + \frac{dZ}{dz} = -4\pi\rho$.
6. Investigate the component acceleration of a particle along and perpendicular to the radius vector drawn to it from a fixed origin; the polar co-ordinates of the particle being given as functions of the time.
7. Prove that, if a particle is moving about a centre of force, the attraction being any function of the distance, the effect of increasing this force by an amount proportional to the inverse cube of the distance will be to make the old orbit revolve with uniform velocity.
8. Prove that, when the index of refraction in a medium is a continuous function of distance from a fixed plane at which it is a maximum, rays of small inclination in the neighbourhood of this plane will be curves of sines, and that all such rays traversing one point, and lying in the same normal plane will meet again approximately in another point.
9. When a plano triangle is immersed in a uniform liquid, prove that the distance of the centre of the pressure from any side is

$$\frac{N}{a} \frac{H_1 + H_2}{H_1 + H_2 + H_3}$$

N denoting the area, a the side in question, H_1, H_2, H_3 the depths of the middle points of the sides.

10. Show that the condition of stability of a uniform right circular cone floating base-upwards, is reducible to the condition of stability of a hyperboloid of revolution resting on a horizontal plane.

11. Show that a small pencil which has undergone reflection or refraction will have two focal lines.

THIRD YEAR ENGINEERING STUDENTS.

NATURAL PHILOSOPHY APPLIED.

1. Prove Guldinus' theorem for the volume of a solid of revolution.
2. Prove that the work done in drawing a heavy body up a rough inclined plane is equal to the work done in drawing it along the base of the plane (with the same coefficient of friction) plus the work done in lifting it through the height of the plane.

3. Investigate the pull in a tie beam due to the weight of a uniform isosceles roof. Appendix, No. 11.

4. A heavy body is placed on an inclined plane whose inclination is greater than the angle of friction. Find the direction and magnitude of the smallest force that will support the body. General Class Examination.

5. A uniform beam is fixed at one end, and a weight is hung at the other, the beam being approximately horizontal. Find the curvature of the beam at any point.

6. Two pieces turning on fixed axes parallel to one another, work together with sliding contact. Investigate the angular velocity-ratio, and the velocity of sliding.

7. Describe Peaucellier's parallel motion; and prove that the motion obtained is rigorously straight.

8. Investigate the velocity-ratio of two shafts connected by a Hooke's joint.

9. Given that the ratio of the two specific heats of air is 1.41, investigate the rise of temperature produced by a small compression when no heat enters or escapes.

10. State, in its most general form, the law for the forms of teeth when the pitch curves are given, the motion being in one plane.

11. If a train weighs 80 tons, and the friction is 7 lbs. per ton, find the work expended in drawing it for 4 miles up an incline of 1 in 200, with uniform velocity; and determine the horse-power of an engine that will do this in 10 minutes.

12. An embankment of brickwork has a section whose form is a right angled triangle ABC. The base BC is 6 ft. long, the height AB is 14 ft. Will the embankment be overthrown when the water reaches to the top, if AB is the face which receives the pressure?

CHEMISTRY.—*Examiner, Dr. Andrews.*

1. Calculate the volume of dry gas under a pressure of 760 mill. in 100 cubic centimetres of air saturated with moisture at 10°C. (Tension of aqueous vapour at 10° = 9 mill.)

2. In the last case calculate the weight of the aqueous vapour present (1 litre of hydrogen = .0896 gm.)

3. How would you determine experimentally the relation between the specific heat of a gas at a constant pressure and its specific heat at a constant volume?

4. Give a general account of the complete spectra of sodium and lithium.

5. What is the relation between the volume of a gas and its molecular formula? Mention any exceptions to this relation, and state how they are explained.

6. How would you decompose by electrolysis the following bodies—water, hydrochloric acid, iodide of potassium?

7. How is iodine prepared from kelp, and what are its characteristic properties?

8. How would you separate the ferric oxide from alumina in a mineral analysis?

9. Give an account of the three modifications of phosphoric acid and of their chief properties.

10. Describe the blow-pipe tests for cobalt, manganese and copper.

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11. Give an account of the chief ores of iron, and of the ordinary method of preparing cast-iron.
12. What is the composition of steel, and how is it prepared, (a) from bar iron, (b) from cast-iron?
13. Describe the method of taking the density of a vapour.
14. Give a general account of the alcohols belonging to the same series as ordinary alcohol.
15. What is the composition of the acids derived by oxidation from the alcohols of the same series, and how are they prepared from their respective alcohols?
16. Describe the chief members of the paraffine series and their relations to the alcohols.
17. Give an account of the induction of electrical currents, and of the principle on which magneto-electrical machines are constructed.
18. What are the distinctive properties of a diamagnetic body?

CIVIL ENGINEERING.—*Examiner, Professor Fuller.*

FIRST YEAR STUDENTS.

GEOMETRICAL DRAWING.

1. Explain what is meant in Descriptive Geometry by the "projections of a point," "projections of a line," "projecting plane of a line," "traces of a line," and "traces of a plane."
 2. Given the projections of a definite line that is not parallel to either plane of projection, determine its length and the angle it makes with each of the planes of projection.
 3. A plane, not at right angles to either plane of projection, is given by its traces, and a line by its projections, determine the projections of the point in which the line cuts the plane.
 4. The horizontal trace of a plane makes an angle of 45° with the axis. The plane is inclined at 30° to the horizontal plane of projection, determine the vertical trace.
 5. A line makes an angle of 45° with the horizontal and 30° with the vertical plane of projection, construct its projection.
 6. A plane is given by its traces, and a line by its projections, find the angle between the line and the plane.
-
7. Given the projections of two lines that meet in a point, determine the angle between them.
 8. Given the traces of two planes that intersect, determine the projections of their line of intersection, also the angle the planes make with each other.
 9. Given the traces of a plane, find the angle the plane makes with the vertical plane of projection.
 10. A plane is inclined at 45° to the horizontal plane of projection, draw the projection of a line inclined at 30° lying in that plane, and through it draw a plane, making an angle of 60° with the horizontal plane of projection.
 11. A square of 1" side lies upon a plane inclined at 45° , one of the sides of the square is inclined at 30° to the horizontal plane, draw its projections.

12. A regular pyramid, with a hexagonal base of 1" side, and a height of $2\frac{1}{2}$ ", is cut by a plane, making an angle of 30° with the horizontal plane of projection, draw the projections of the surface of intersection, and find its real size.

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SECOND YEAR STUDENTS.

SURVEYING, LEVELLING, MENSURATION, &c.

1. Describe the method of keeping a field-book for a chain survey, giving complete information as to the details of one line, its connexion with other lines, offsets, &c.

2. What is the reason for reducing the measurements of line on sloping ground to their horizontal value, and how is this practically done in the field?

3. Describe the methods used for setting out long offsets perpendicular to the line being measured.

4. Prove the expression for the length of a split line and of a tie line in terms of the sides measured and of the segments into which a line or lines may have been divided.

5. In a chain survey, explain how the measurement of a line may be continued across a river; also the method when an instrument for measuring angles is employed.

6. Explain the precautions necessary to be taken to ensure accuracy in the measurement of a base line for a large trigonometrical survey; and describe the apparatus employed by Colonel Colby in measuring the Irish base.

7. The following are three sets of readings taken upon the level staff, when held at stations 100 feet apart:—

First, 4.57, 3.72, 4.78, 5.23.

Second, 8.24, 6.73, 5.72, 3.21, 0.18.

Third, 7.18, 6.09, 4.99, 3.01, 2.04.

Fill up a field-book with the above and reduce them to datum 100 feet below the level of the point upon which the staff is first held; also give the necessary checks to show that the field-book is made up correctly.

8. Demonstrate the prismoidal formula.

9. Calculate in cubic yards the contents of a cutting 30 feet wide at the base; 100 feet long, slopes of sides $1\frac{1}{2}$ to 1; end heights 20 feet and 25 feet, by the prismoidal formula, method of mean heights and method of mean areas.

10. The numbers in Bidder's tables for heights of 16 and 20 feet, are Red 44, Black 795; show how these are obtained.

11. Describe the method of setting out a circular curve to join two straight lines by means of chords and offsets.

12. Explain how to set out in the field by the use of the level, the half breadths of land required for a railway cutting through sidelong ground.

13. Explain the terms "coursing spiral," "heading spiral," "face line," and show the position of them upon the plan of the soffit of a skew arch, and upon the development of the soffit.

14. Show how to calculate the axial length of the intradosal spiral, and explain why the angle of that spiral with the axis of the bridge usually requires adjustment.

15. When a stone has to be worked as a voussoir for a skew arch, describe the operations for forming one of the required surfaces.

SECOND AND THIRD YEAR STUDENTS.

OFFICE AND FIELD WORK.

1. Adjustments of the Y Theodolite :
 - (a) For the prevention of "parallax."
 - (b) For placing the line of collimation in or parallel to the axis of the telescope.
 - (c) For placing the bubble of the spirit level attached to the telescope in the middle of its run when the line of collimation is level.
 - (d) For the spirit levels attached to the circular plates.
 - (e) For the index of the vertical arc.
 Explain how to test and to make, if required, the above adjustments.
2. Adjustments of the Transit-Theodolite :
 - (a) The vertical axis must be truly vertical.
 - (b) The horizontal axis must be truly level.
 - (c) The line of collimation must be at right angles to the horizontal axis.
 - (d) The bubble-tube must be parallel to the line of collimation when angles of altitude require to be taken.
 Explain how to test and to make, if required, the above adjustments for the above conditions.
3. Prove that in a Gravat's level there is no exact place in the image field to which it is necessary that the horizontal wire of the diaphragm be brought. You may assume that the sum of the reciprocals of the distance of the conjugate foci from the field glass are equal to the reciprocal of its focal length.
4. Explain how you test in the field a Gravat's level to ascertain whether it gives level sights when the bubble of the spirit level is in the middle of its run; and how you adjust the instrument if found not to be correct.
5. How do you adjust a level so that it may "traverse"?
6. Explain the construction of the sextant. Its principle and the adjustments it requires.
7. Explain the Prismatic compass, and show how it is used in surveying.

THIRD YEAR STUDENTS.

CIVIL AND MECHANICAL ENGINEERING.

1. Describe the method of preparing Ransome's Patent Stone—for what kind of work is it more especially adapted?
2. Explain the difference between pure clay, marl, and loam. What are the qualities required in clay for making fire bricks and common bricks?
3. Describe and sketch Hoffman and Licht's annular kilns, and give the reasons for the great economy of fuel in using them.
4. What are the essential differences in composition of Pure, Rich or Fat lime, Poor lime, and Hydraulic lime?
5. What is Portland cement? how is it manufactured? and what tests should be made of its quality before using it?
6. Sketch a King and Queen Truss, and give the names of their different parts.
7. Design a rectangular beam of Memel to span an opening of 315 feet. The beam is to support a uniform load of 1 cwt. per foot, together with a weight of 10 cwt. at six feet from one end. The depth of the beam to be twice its breadth.

8. A beam of 9 inches square and 15 feet long has 3 feet of one end built into a wall. It slopes upwards, and makes an angle of 30° with the wall. It is loaded with 1 ton at its free end. Determine the stresses on the upper and lower surfaces of the beam at 10 feet from the free end.
9. Two similar rectangular beams, the dimensions of one being (n) times those of the other, are supported at their ends. When their load is their own weight, find the ratio of their stress intensities at similarly situated parts.

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10. Also in the above find the ratio of their deflections at the centre.

11. A Bridge Truss consists of six squares, and six diagonals sloping down from the centre towards the points of support. The sides of each square are 8 feet. It is supported on the ends of the lower horizontal member, and loaded at each of the lower joints as follows:—3, 3, 6, 6, 6. Find the stresses on the different members of the truss.

12. Describe some methods of stiffening the horizontal platform of Suspension Bridges.

13. Describe the method of excavating for and building the side lengths of a tunnel when it is through soft ground; also the methods used for supporting the lining of the vertical shaft during the construction of the tunnel.

14. Determine the thickness of a cast-iron pipe 3 feet in diameter, to withstand a pressure of a head of 200 feet of water, taking 15,600 lbs. per square inch as the tensile strength of cast-iron, 62.4 lbs. as the weight of a cubic foot of water, and a coefficient of safety of 6.

15. Determine the diameter of a pipe 52,906 feet long, that is to deliver 135 cubic feet of water per minute, with a loss of head of 185 feet. The approximate formula of M. Prony may be used.

16. When water, for the supply of a town, has to be impounded in an artificial reservoir, describe the works that have to be constructed.

17. Explain the method of preparing the land for Bed-work and Catch-work Irrigation.

18. Describe the "modules" that have been used for measuring the quantity of water delivered from a channel for the purposes of irrigation.

19. Describe the nature and use of a Specification for an Engineering work, and give some of the general conditions usually attached to it.

NATURAL PHILOSOPHY.—*Examiner, Professor Everett.*

EXPERIMENTAL PHYSICS.

1. A uniform bar supported at both ends is 36 inches long and weighs 3 lbs. At what point of its length must a weight of 5 lbs. be attached that the pressures on the supports at the two ends may be as 2 to 1?

2. The base of an inclined plane is 4 ft. and the height 3 ft. What force acting parallel to the plane will sustain a weight of 112 lbs. resting on the plane without friction?

3. A body weighing 10 lbs. is drawn aside until the string which supports it is inclined at 45° to the vertical. The string which draws it aside is horizontal. Find the forces with which the two strings are stretched.

4. A stone is thrown vertically upwards with a velocity of 100 feet per second. How high will it ascend; and what will be its velocity two seconds after the commencement of the ascent?

Appendix,
No. 11.
General
Class Ex-
amination.

5. Find the specific gravity of a liquid in which a pound ball of copper loses $1\frac{1}{2}$ ounces of its weight, the specific gravity of copper being 8.4.
6. The specific heat of copper being .095, and the heat of liquefaction of ice being 79; how much ice at 0° will be melted by an ounce ball of copper at 100° ?
7. A magnetized needle exactly balanced at its centre of gravity is carried from the north magnetic pole along a magnetic meridian to the south magnetic pole. Describe the directions in which it will point at different parts of its journey.
8. Describe the electrophorus, and explain its action.
9. Give a description and simple sketch of some one form of air-pump.
10. An object is moved away from a position close in front of a concave spherical mirror to a very great distance in front. Describe the movements of its image, stating when the image is erect, when inverted, when larger, and when smaller than the object.
11. Taking the velocity of sound in air as 1100 feet per second, what will be the wave-length, in air, of a note of 275 vibrations per second, and what will be the wave-length of a note which is an octave higher than this?
12. What is Ampère's rule for remembering the direction in which a needle is deflected by a current?

NATURAL HISTORY.—*Examiner, Dr. Cunningham.*

BOTANY.

[Senior Students omit questions 2 and 10, Junior Students omit questions 9 and 12.]

1. Describe the structure of the stem of the various groups of vascular Cryptogamia.
2. Give a brief account of the epidermis and its appendages.
3. Explain what is meant by the terms epiphytes and parasites, and give illustrations of epiphytic and parasitic plants.
4. What are cladodes? Give examples.
5. Briefly-describe the principal forms of subterraneous stems and branches.
6. Mention the groups into which climbing plants are divided by Darwin, and give examples of each group.
7. Give the names and characters of the principal forms of capsular fruits, as given in the lectures.
8. State the names and characters of the subdivisions of Rosaceae, and give examples of plants belonging to each group.
9. By what characters may Epacridaceae, Monotropaceae, Pyrolaceae, and Vacciniaceae be distinguished from Ericaceae?
10. State the characters of the Euphorbiaceae. Give the names of some of the more important genera, and mention anything you know with regard to their peculiarities.
11. To what orders do the following genera of plants belong:—*Agri-
monia*, *Ajuga*, *Allium*, *Alnus*, *Asperula*, *Betula*, *Brassica*, *Calluna*,
Cerastium, *Cereus*, *Daucus*, *Epilegium*, *Galanthus*, *Hedera*, *Jasione*,
Lathraea, *Medicago*, *Mentha*, *Pedicularis*, *Pyrus*, *Rumex*, *Silene*, *Ver-
bascum*, *Vicia*? Give the English names of the genera, when they pos-
sess any.
12. State what you know regarding the characters and classification of the Coniferae. In what respects do Coniferae differ from Gnetales and Cycadales?

CHEMISTRY.—*Examiner, Dr. Andrews.*

*Appendix,
No. 11.*

PRACTICAL CHEMISTRY.

*General
Class Ex-
amination.*

1. What are the blow-pipe tests for cobalt, copper, manganese, and lead?
2. Give an account of the chief *reducing* agents, and describe their application to the reduction of the ferric and mercuric salts, and of the chromates, to a lower state of oxidation, or to the metallic state.
3. Describe the method of analysing bone earth.
4. Give an account of the absorption bands of blood and bile.
5. Describe the method of separating meconic acid from opium, and mention its tests.
6. What are the tests for glucose?
7. How would you determine the amount of urea in urine?
8. How would you recognise and distinguish from one another, uric acid, urate of soda, and urate of ammonia?
9. How would you discover the presence of nitrates and of nitrites in well water?

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.—*Examiner, Robert Foster Dill, M.D.*

1. Describe the curve, and the circle of Carus.
2. What is the rule by which the power is economised in extracting the fetus through the pelvis?
3. By what means may the character and measurements of the pelvis be ascertained in parturition?
4. Describe the operation for induction of premature labour. State the circumstances in which it may be required, and the period suited to the operation.
5. What are the rules by which we may calculate the term of gestation?
6. What are the derivations of the terms "maternal dystocia" and "fetal dystocia"? How are these terms used.
7. When a hand and foot present together, how may they be distinguished? What is the interference that is indicated? When is this interference necessary?
8. Wherein is the life of a child more endangered in breech than in cephalic presentations? How may this danger be lessened?
9. What is understood by (1) Obstructed flow of the menses; and (2) Interrupted flow of the menses?

MEDICAL JURISPRUDENCE.—*Examiner, Professor Hodges, M.D., F.C.S.*

1. What is the earliest period of uterine life at which a child may be born alive, and capable of living to manhood?
2. What are the symptoms produced by a poisonous dose of Extract of Belladonna?
3. State the smallest dose in which the following poisons have produced death, Tartar Emetic, Strychnine, Cantharidis, Phosphorus.
4. What is the treatment required in a case of poisoning by Phosphorus?
5. Describe the method of applying Dialysis for the separation of Oxalic Acid from the contents of the stomach, and the processes required for the identification of that poison when mixed with Tartaric Acid.
6. Describe the method of obtaining Haemin Crystals from Blood Steins.